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ABSTRACT

Having implemented a policy that allowed schools to retain children in kindergarten an extra year, the Boulder Valley Public School District in Colorado conducted a study to determine the cognitive and emotional benefits of retention in kindergarten and the characteristics that led to decisions about retention. The study involved a research review of existing literature, an examination of first grade outcomes, and interviews with parents and teachers to determine their perceptions about young children and their readiness for first grade. The study revealed that (1) the use of Gesell tests to make individual placement decisions cannot be defended on the basis of existing research; (2) the existing research does not show either academic or social-emotional benefit from retaining immature children; (3) the finding of no benefit on most measures and only a one-month gain in reading raises serious questions about the efficacy of an extra year in kindergarten; (4) data from parents did not indicate that there was an average benefit of retention or two-year kindergarten programs on children's academic progress; (5) diversity existed among the kindergarten teachers with respect to what they believed about child development and the best ways to educate young children; (6) beliefs about development were related to retention practices, and seemed to be shared within a school building; (7) kindergarten teachers believed retention and other two-year programs had benefits that outweighed their risks; and (8) teachers in the same school usually had very similar policies in terms of the kinds of pupil characteristics that should lead to kindergarten retention. It was concluded that two-year kindergarten programs are an ineffective solution to the problem of escalating expectations in kindergarten. Six pages of references are included. Appendixes contain a first-grade rating form for teachers, a parent interview schedule, coding categories for teacher interview analysis, and instructions for case reviews. (HOD)

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BOULDER VALLEY KINDERGARTEN STUDY:

RETENTION PRACTICES AND RETENTION EFFECTS

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Boulder Valley Kindergarten Study: Retention Practices and Retention Effects. Boulder, CO: Boulder Valley Public Schools.

EXECUTIVE SUMMARY AND POLICY IMPLICATIONS

The Kindergarten Study was initiated by the Director of Elementary Education and the Early Childhood Committee. In 1982-83, elementary schools in the Boulder Valley differed markedly in the extent to which children were assigned to an extra year of school before first grade. In some schools 25% of the children were retained in kindergarten (with as many as 38% recommended to repeat kindergarten). In other schools 0% were retained. At present, two Boulder schools have developmental kindergarten programs. In these schools, potential kindergarteners are given the Gesell Developmental Test in the spring or summer before school and are assigned either to a prekindergarten class (Level I) or to a regular kindergarten (Level II). It is expected that Level I kindergarteners will then spend the following year in regular kindergarten. One of these schools also has a pre-first grade class in which children judged unready for first grade spend an extra year. Other schools have informal programs where children repeat regular kindergarten. All of these practices are reported to the district as kindergarten retentions and are included in what we mean by two-year kindergarten programs.

The purposes of this study were to examine the process whereby children are retained in kindergarten and to measure the effects of two-year kindergarten programs. The study was guided by the following research questions:

1. What are the cognitive and emotional benefits of retention in kindergarten?

2. What are the characteristics of children that lead to retention decisions? To the extent that teachers differ in their philosophy about retention, how might these differences by typified?

3. Is age related to retention decisions and subsequent academic performance? Would a different entrance age lead to fewer retentions or more success in school?

4. What is the predictive validity of the Gesell School Readiness Test and other selected readiness measures?

5. How is time spent in developmental and transitional classrooms?

6. If a student is to be retained, is kindergarten the best year?

A summary of relevant research was provided in Chapter 1 for those research questions that could not be investigated locally. In addition, data that addressed question 5 could not be analyzed in the available time.

The study report is organized into chapters, each representing a separate research component. The major findings for each chapter can be summarized as follows:

Chapter 1. Existing Research: A Policy Summary

Five separate bodies of research were reviewed.

Age effects

The literature on "age effects" consistently shows that first graders who are youngest in their class have slightly lower achievement than the oldest first graders (by 5-10 percentile points). The "age effect" disappears by third grade so that relatively young children within a grade are no longer at a disadvantage. The analyses of Boulder Valley achievement data reveal that the local age effect is consistent with that summarized from previous research. A change in entrance age is not recommended on the basis of these findings. The "youngness" problem is always relative. The slight disadvantage of the youngest first graders exists whether the entrance age is February 1 or September 1.

A problem of "escalating standards" was identified. Kindergartens become more and more demanding in response to an older population with more preschool experience. As kindergarten expectations begin to look more like expectations for first grade, some five-year-olds may not be ready for the more advanced work that has become the norm. Raising the entrance age or retaining children perpetuates the problem since standards are continually raised on the basis of what the older and more experienced children can do. Only solutions that address excessive demands and the range of individual differences are likely to be effective.

Philosophies about readiness

The Gesell developmental point of view was summarized. Gesell theory holds that children's readiness for any given task is determined by biological maturation. Attempts made to teach children before they are ready will be ineffective and will cause serious harm to their social and emotional development. The Gesell philosophy is based on nativist or hereditarian theory and is contrasted with environmentalist, behaviorist learning theory, which was also summarized.

More modern conceptions of cognitive development have replaced these extreme theories and are more interactional; i.e., the joint influence of both environment and heredity on learning is acknowledged. More recent research based on Piaget's conception of development (which differs from Gesell's) gives more importance to learning experiences in determining the rate of development. Based on what we now know about learning and development, it is clear that children should not be pushed way beyond their developmental level. However, it is also ill-advised to withhold instruction or "teach down to" children who are developmentally young. Cognitive stimulation is essential for children to progress from one developmental level to the next.

The Gesell School Readiness Tests

The Gesell tests are intended to assess a child's developmental age and are used to screen children into developmental kindergartens or to determine readiness for first grade.

The Gesell tests do not have adequate reliability for making important individual decisions. In the only study available, the standard error of measurement was so large that the confidence interval for a child performing at the 5-year-old developmental level extended from 4 1/2 to 5 1/2.

The norms for the Gesell are unrepresentative and outdated. For 5- to 9-year-olds, the norms were based on only one high socio-economic community in Connecticut. Inadequate norms mean that the test cannot determine that a given child is or is not functioning like a "typical five-year-old."

The predictive validity evidence for the Gesell is inadequate. In the best study available, it was still the case that for any group of children identified as "unready," half would be misidentified. (A predictive validity study is underway in the Boulder schools but will not be complete until children tested previously complete first grade in the spring of 1985.)

The Gesell does not measure a trait distinct from IQ. The Gesell is just as highly correlated with measures of intelligence as it is with other developmental measures. As a consequence, more low socio-economic children and slow learners will be identified as "developmentally" young by the test.

The evidence for use of the Gesell as a clinical instrument does not meet minimum professional standards.

THE USE OF THE GESELL TESTS TO MAKE IMPORTANT INDIVIDUAL PLACEMENT DECISIONS CANNOT BE DEFENDED ON THE BASIS OF EXISTING RESEARCH. RELIABILITY AND VALIDITY ARE BELOW MINIMUM TECHNICAL STANDARDS.

Effects of Nonpromotion

Over 50 research studies and several recent research syntheses address the effects of grade repetition. Major reviewers consistently found that nonpromotion has negative effects. By this they mean that repeating a grade does harm rather than good. Across studies, retained children are behind comparable children who were not retained in all areas of academic achievement, on measures of social-behavioral adjustment, in self-concept, and in attitude toward school.

Researchers have attempted to explain why so many educators believe in the benefits of retention in view of the pervasively negative evidence. The best explanation is that retained children usually make some progress the second year, but not as much as their promoted counterparts. Because teachers do not have the benefit of this latter comparison, they are more likely to trust their impression that the child is doing better than before.

The four studies cited by the Gesell Institute as proof of the benefits of retention lacked control groups; this research design was criticized by major reviewers as biased in favor of retention and far short of standards for rigor in social science.

Effects of Nonpromotion in Kindergarten and First Grade

The Gesell philosophy expects that retention will be effective only if children repeat because they are "immature" and not if they are slow learners or suffer some other academic problem. Several studies have been done to evaluate programs where children were either retained or placed in a transitional pre-first class because they were "unready" for first grade. In all but two of the eight studies, CHILDREN WHO WERE IDENTIFIED AS POTENTIAL FAILURES BUT WHOSE PARENTS REFUSED RETENTION ACHIEVED THE SAME OR BETTER THAN CHILDREN WHO REPEATED. In two studies, there was an initial benefit in reading for the retained children, but this advantage disappeared by third grade. Furthermore, children who had been identified as "immature" and "potential failures" but who did not repeat were indistinguishable from normal children by the time they reached third grade.

In three studies, there were no differences between repeaters and potential repeaters on social adjustment measures. In an interview study, 84% of the retained children said they were "sad" and "upset" about being retained.

THE EXISTING RESEARCH DOES NOT SHOW EITHER ACADEMIC OR SOCIAL-EMOTIONAL BENEFIT FROM RETAINING IMMATURE CHILDREN.

Chapter 2. First Grade Outcome Study

The purpose of the first grade outcome study was to determine the effects of a two-year kindergarten program on success in first grade. The four BVPS schools with the highest kindergarten retention rates were identified, and all of the first-graders who had been in an extra year program were included as

the RETAINED sample (n=40). A control sample was selected from low retaining schools to match each case on age (when first entering kindergarten), sex, readiness score, and second language (n=40). The retained and control groups were compared at the end of first grade on CTBS scores, teacher ratings of achievement, and teacher ratings of adjustment and learner self-concept.

On all but one outcome measure there were no differences between the retained and control groups. Children who were completing three years of school were the same as their matched controls (with two years) on CTBS math scores and on teacher ratings of reading, math, social maturity, learner self-concept, and attention.

The only difference between groups occurred on the CTBS reading test where the retained children were ahead of controls by five points. This gain translates into a difference of seven percentile points in relation to national norms or one month in grade equivalent units.

Although the retained children and their matched controls are below average in Boulder Valley schools, they are above average compared to national norms. In reading the two groups were at the 63rd and 56th percentiles, and in math at the 78th and 81st percentiles, respectively.

THE FINDING OF NO BENEFIT ON MOST MEASURES AND ONLY A ONE-MONTH GAIN IN READING RAISES SERIOUS QUESTIONS ABOUT THE EFFICACY OF AN EXTRA YEAR IN KINDERGARTEN.

Chapter 3. Parent Survey

A sample of parents was identified following the design of Chapter 2. In addition to parents of first graders who had been retained in kindergarten (n=29) and parents of matched controls (n=28), two small samples were identified for children who had repeated first grade (n=7) or who had been

recommended for kindergarten retention but whose parents had refused (n=10). Parents were surveyed by means of a structured telephone interview. Interviews were transcribed (without identification) and are summarized in Chapter 3.

The data from the parent survey indicate that there is no average benefit of retention or two-year kindergarten programs on children's academic progress in first grade, attitude about school, relationship with peers, and readiness for second grade. There were no differences between the retained and nonretained control group. Furthermore, the "recommended but not retained" group looked no different from the retained children by the end of first grade.

The reports of parents whose children had repeated kindergarten were variable. At the same time that the parents perceived that more good than harm had resulted from retention, there were also poignant reports of adjustment to perceived failure, embarrassment because of the difference between age and grade, and conflict within families and between family and school. Parents of the "recommended but not retained" children reported considerable pressures by and conflicts with school personnel surrounding the decision not to retain. Yet, these parents had no regrets about their decision to refuse retention and perceived no negative consequences attendant on it. We believe this group is underrepresented in the study since there were many indications of transfers, withdrawals, and "shopping around" in response to other school's recommendation to retain.

In addition to statistical summarization, excerpts from responses allow the parents to speak for themselves. The quotations below are examples of the type of data provided by group in reply to each major question. Here parents were asked to recall what their child's progress had been in the first year of kindergarten.

The parent of a retained child:

> "We were happy with his progress. We were happy also that he really enjoyed the year. He still has a super strong feeling about school--he managed to develop that attitude toward school. He seemed to be picking up a lot of skills. But at the spring conference the teacher told us what happens to boys who are pushed ahead of where they should be. He just didn't have the social skills."

The parent of a nonretained child (selected from a low-retaining school but matched on sex, age, and entry skills with a retained child):

> "I had talked with his teacher and he improved greatly during kindergarten. I guess he matured a lot during kindergarten. I don't think it's so much in reading and writing or any subjects they took but I think he learned to react to people a little bit differently. His report card said that he had improved greatly and he still had a lot of improving to do in some of the subjects and in social interaction he was improving."

The parent of a recommended but not retained child:

> "I had a disagreement with the teachers in kindergarten. Basically I felt that kindergarten was a time for socialization, getting patterns of learning. They more or less stressed certain achievements. You had to know all your colors, you had to know how to count to 100 and she could do all those things but apparently not to their liking, which I didn't approve of. I felt that she had achieved what she needed to achieve in kindergarten and there was no need to put stress on the child at that point. The report card said that her rate of progress was alright but that she shouldn't go on to first grade."

Chapter 4. Teacher Perceptions about Young Children and Their Education.

Thirty nine of the 45 Boulder Valley kindergarten teachers were interviewed using a semi-structured format. Transcripts were coded and categorized to characterize teacher beliefs regarding the following issues: the characteristics of children unprepared for first grade, whether anything can be done for the unprepared children, the teachers' view of first grade at their school, their theories of child development, descriptions of their kindergarten, and their view of the benefits and risks of school retention.

Great diversity exists among the kindergarten teachers in this district with respect to what they believe about child development and the best ways to educate young children. Philosophical views range from nativists who believe that development procedes naturally and physiologically and without much

assistance from the outside to environmentalists who believe that development is at least partially under the tutorial control of teachers and others. Four groups of teachers were identified based on their beliefs about the nature of development and the variety of intervention that is likely to benefit young children. For example, in response to questions about what teachers can do for a child who is unready, the groups can be characterized by the following paraphrased responses.

Group One Teachers:

> "Teachers can provide child with more time to mature; place child in developmental kindergarten, preschool, send him home another year; place in slow group in class; reduce instruction below frustration level, lower expectations, boost self-concept, use manipulatives; retain in kindergarten or transition; providing academic assistance is irrelevant and harmful.

Group Two Teachers:

> "The teacher can identify problem area, refer for professional evaluation, build up or work around problem area; adapt instruction; provide academic assistance aimed at correcting the disordered ability."

Group Three Teachers:

> "The teacher can arrange the environment so every child can be successful; study the child to see what interests him; set up cooperative, peer teaching; individualize instruction; retain only if first-grade teachers are not likely to accommodate individual differences."

Group Four Teachers:

> "The teacher can provide additional academic help; accommodate differences in achievement; hold high expectations, reinforce and train; work hard and encourage the pupil to work hard."

Beliefs about development were related to retention practices, and seemed to be shared within a school building. For example, those who believed that "no intervention was the best intervention" reported retaining a larger number of children. An important influence on teachers' beliefs and retention practices seems to be the perceived attitudes of the first grade teachers in the building, their willingness to accommodate differences in entry level

skills (as opposed to sending a child back to kindergarten), and their desire to proceed directly into the reading curriculum. Another important influence in teacher beliefs is the increased experience of entering kindergarteners and parent demands that the children learn more.

The vast majority of kindergarten teachers believe retention and other two-year programs have benefits that far outweigh their risks. Of course, teachers in low-retaining schools have a different reference point for these statements. A majority of teachers believe that retention in kindergarten is preferable to retention in first grade although there were several dissenters from this view. Many teachers felt that transition rooms and two-year kindergarten programs were preferable alternatives to simple retention in kindergarten. We believe that there is a kind of pent-up demand for two-year and transition programs due to the degree of perceived value attached to such programs by the teachers and the relative absence of perception of their risk.

There is some concern from an analysis of teachers' beliefs and strong feelings that children whom teachers recommend for retention but whose parents resist will not be given complete opportunities to succeed.

We believe that both retention practices and beliefs about readiness may be the result of downward pressures of the academic curriculum into kindergarten and the upward pressures to accommodate the older and more able pupils entering kindergarten.

Chapter 5. Teacher Judgments about Readiness.

An analysis of existing data and a small experiment were carried out to learn what pupil characteristics are associated with the decision to retain a child in kindergarten. Different "policies" were discernible from the characteristics of children who spent two years in kindergarten (or were

recommended to repeat) in three high-retaining schools. One school consistently retained children with low readiness skills. In the second school a combination of factors seemed to be associated with the retention decision, low readiness scores, being young, and being male. In the third school the policy appeared to be to recommend young boys for kindergarten retention (irrespective of readiness scores); in fact, because the parents of children with higher readiness skills more often agreed to the retention decision, the retained children were above average in their kindergarten class.

A policy capturing experiment was conducted involving all 44 Boulder kindergarten teachers. Teachers read summaries of 45 pupil files and made judgments about retention and likelihood of success in first grade based on five pupil characteristics: sex, age, physical size, academic skills, and social maturity. The policy capturing experiment showed the weight each teacher gave to each factor in making recommendations for 45 pupil cases. The two major factors emphasized by almost all teachers were the academic and maturity factors. Generally, there was not a relationship between teacher policies about pupil characteristics and retention rates. However, five teachers (three schools) had very extreme policies compared to other teachers in their weighting of social maturity; i.e., they would retain an immature child no matter what the other characteristics were. These teachers also have very high retention rates in actual practice.

Teachers in the same school usually had very similar policies in terms of which pupil characteristics should lead to kindergarten retention. But across the district these policies were much more varied. In some schools an immature child (regardless of academic skills) is the candidate for a two-year program. In other schools children with low academic readiness skills will be held back whether or not they are mature.

STATEMENT OF POLICY IMPLICATIONS

The Purpose of this statement is two-fold:

1. To argue that a problem exists.
2. To suggest two avenues of solution to the problem.

The Problem

Providing two years before first grade is an extremely costly but minimally effective solution to a short-term problem. The cost to the taxpayers is $3130 per child. The effects are, on the average, one month gain in reading achievement and no advantage in math, learner self-concept, social maturity, or attention level.

The absence of a district policy has created 22 minipolicies. Consider two children who live across the street from each other but are separated by an arbitrary line assigning them to two different neighborhood schools. They are the same sex and have the same birth month, socio-economic status, and ability level. Yet one has a 25% probability of being retained, the other 0%. Parents and children assigned to the low-retaining school are never aware that they have a problem of "youngness" or "unreadiness." At the end of first grade the nonretained children have the same achievement and social adjustment as the retained children will have when they finish first grade one year later. Now imagine the child whose parents move across the street and, as a result, confront the disparities among school-based policies. There is no evidence to back up the claim that the repeated child goes to the head of his or her class.

Two Avenues

We recognize that individuals within the district have strong intellectual commitments and interests that are supported or attacked by the results of the study. We expect this report will prompt disagreement. Further polarization

of the community prevents constructive discussion and assimilation of the report by the various interest groups (teachers, administrators, the early childhood committee, parents, scholars). The first avenue of response ought to be discussion and education. We ask that questions such as the following be considered: If so few positive effects of two-year programs can be objectively demonstrated, what is the function of such programs? Does retention sometimes serve the needs of the school more than the child? Is it possible to go back to the perceived problem (for which two-year programs are one solution) and consider other alternatives? Is it necessary to set the level of instruction in a classroom to meet the needs of the older and more prepared students and deal with the less advantaged by segregating them? Are there alternative ways to cope with individual differences? Can teachers retrain themselves if necessary to deal with more diverse pupil characteristics within the classroom? (Many teachers in low-retaining schools already have variable standards to match variable levels of pupil performance and share with first- grade teachers a willingness to accommodate to individual differences.) Is it possible to discuss these issues with first grade teachers to soften the implicit requirements that "good" kindergarten teachers will only promote those children who are ready to read?

We recognize, however, that some disagreements are best left undiscussed. The enormous disparity in beliefs held by teachers has not been openly acknowledged heretofore. Perhaps the community of kindergarten teachers could not withstand direct confrontation with each others' disparate philosophies. Perhaps no consensus is possible. If so, the second avenue of response is action by administrators that might follow these guidelines:

1. Issue disclaimers to parents that kindergarten retention and other 2-year programs have not been found to produce average benefits in measured achievement or affective areas.

2. Issue disclaimers that the Gesell test and the clinical judgments that comprise its "scoring" do not meet minimum standards for reliability and validity.

3. Disallow expansion of two-level or developmental kindergartens into schools that do not presently operate them.

4. Promote workshops that focus on analysis of teaching and adaptation of classroom teaching methods and curriculum rather than diagnosis of pupil traits and developmental stages.

5. Promote workshops that enhance the skills of kindergarten and first-grade teachers in working with diverse individual children within the classroom.

6. Expand academic assistance programs.

7. Change the curriculum of kindergarten so that it emphasizes learning to learn and socialization rather than producing products such as reading readiness levels or counting to a certain number.

8. Change the curriculum and expectations of first grade so that reading readiness is not a mandatory prerequisite for entry into first grade.

Two-year kindergarten programs are an ineffective solution to the problem of escalating expectations in kindergarten. Other solutions exist that do not segregate children on the basis of unreliable tests. These alternatives can be found in some of the low-retaining schools. The practice of retaining children in kindergarten exacerbates the escalation problem as kindergartens become geared more and more for six-year-olds rather than five- year-olds.

CHAPTER 1

Existing Research: A Policy Summary

Doctoral dissertations and other scholarly writings invariably begin with an ad nauseum review of previous research. The purpose of these reviews, as every student knows, is to shape and justify the methods and hypotheses of the proposed study. As background to the Boulder Valley kindergarten Study, to be sure, we were interested in existing studies on the effects of kindergarten retention. However, the purpose of this chapter is not to satisfy scholarly conventions but rather to provide a policy relevant summary of previous research. Research findings are important in their own right if consistent trends exist with implications for practice.

Initially, the background chapter was to have two parts: a review of non-promotion research preliminary to the work in Chapter 2 and a review of the Gesell School Readiness Test as part of the predictive validity study which has begun in the Boulder schools but is not complete.* However, these topics grew into several separable issues. Many of the books and articles cited as evidence of the Gesell's validity do not treat the psychometric properties of the test but rather are statements of philosophy regarding school readiness. When empirical studies are reported they more often address the issue of lower school achievement for children who are young in their grade rather than the Gesell's validity or the effectiveness of two-year kindergartens. Thus, prior to the questions of retention effects or identification of at-risk children is the question of a relation between entrance age and school success. Is there a problem for which testing and retention are the solutions? What is the philosophical perspective that justifies these as the best solutions? Are there alternative solutions to the perceived problem? (That is, are there

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* Kindergarten children tested in the spring of 1983-84 will not complete first grade until June 1985.

other developmental theories or other philosophies of early childhood education that would suggest a different approach?)

Despite the broadening of issues, this chapter still has an emphasis on the Gesell test and Gesell philosophy. This does not mean that we adopt the teachings of the Gesell Institute as our own. We were, however, guided by the Gesell point of view in identifying issues to be pursued (as in the age-effect above) and in the selection of research literature to be reviewed. For example, an eleven-page bibliography was obtained from the Gesell Institute, and nearly all published books and articles were obtained. For the many unpublished papers and reports, authors were contacted by phone or by letter. No such attempt was made to represent any other body of work exhaustively. Because the Gesell test and philosophy are salient in the Boulder schools with the highest kindergarten retention rates, they are given special attention here. Other readiness measures and other early-childhood perspectives are presented but are not treated comprehensively.

The final outline of Chapter 1 addresses these topics:

1. Entrance age and school achievement

   Is there a relationship between kindergarten entrance-age and later success in school? What are the implications for entrance age policy?

2. Philosophies about readiness and learning

   What is the Gesell view of school readiness? What are the similarities and differences between the Gesell philosophy and other theories about learning in early childhood? What practical implications do these theoretical differences have for school programs?

3. The Gesell "School Readiness Test"

   What is the purpose of the Gesell test and how is it used? What are the technical properties of the Gesell test, regarding norms, reliability, and validity? How do other predictors such as IQ, pre-

reading skills, or perceptual motor development compare with chronological age or developmental age in predictive validity? What criteria are appropriate for judging the Gesell as a clinical instrument? What are the implications for school policy of less than perfect predictions?

4. Effects of Nonpromotion

What are the positive and negative effects of grade retention? Are the effects different for early elementary grades versus later grades?

5. Effects of Nonpromotion in Kindergarten and First Grade

If children are retained in kindergarten or first grade because of immaturity rather than school failure, what are the positive and negative effects?

ENTRANCE AGE AND SCHOOL ACHIEVEMENT

1.1 Academic problems of the youngest children in first grade

Numerous researchers and reviewers have addressed the question of within-grade age effects, especially for first grade. When the children who are youngest in their grade are compared with their older-age classmates, they are nearly always less successful (Beattie, 1970; Bigelow, 1934; Carroll, 1963; Davis, Trimble & Vincent, 1980; Green & Simmons, 1962; Hall, 1963; Halliwell & Stein, 1964; Kalk, Langer & Searls, 1981; King, 1955). Children who are youngest in their grade are more likely to be referred to special education (DiPasquale, Moule & Flewelling, 1980), more likely to be labelled as learning disabled (Maddux, 1980), and more likely to have to repeat a grade (Langer, Kalk & Searls, 1984). However, Gredler (1980) urged caution in the interpretation of these later indices since referral dates and retention decisions are influenced by the opinions of teachers who might either expect young children to have difficulty or decide not to retain a child who is already old.

When achievement test results are used, which are less susceptible to teacher bias, there is still an effect favoring the older children (e.g., Halliwell & Stein, 1964; Davis, Trimble & Vincent, 1980). The achievement differences are not necessarily dramatic, however; for example, based on sample sizes of 8,500 per grade, Davis, Trimble, and Vincent (1980) found that children who were fully six when they entered first grade were nine percentile points ahead of children who were still only five when they started first grade. (The difference in reading was five percentile points.) Langer, Kalk, and Searls (1984) reported a "significant" correlation between relative age and combined achievement score, but the actual correlation was only .05 (data were for 9-year-olds, however).

Furthermore, the effects of being young or old in grade tend to diminish as grade level increases (Langer, Kalk & Searls, 1984), although some studies still find significant effects at fourth and fifth grades (Halliwell & Stein, 1964). One frequently cited study by Miller and Norris (1967) divided children into early* (5-8 to 5-11), normal (6-0 to 6-7), and late (6-8 to 6-11) entrants. Although there were significant differences between early and normal entrants on readiness measures, there were no measurable differences at the end of second, third, and fourth grades. Miller and Norris attributed the lack of differences to the effectiveness of the ungraded program in individualizing reading instruction. In reviewing this literature, Weinstein (1968-69) proposed that whether an initial deficit for young first graders would persist into higher grades depended on the attitudes and expectations of the teachers in responding to the ability range found in typical first grade classrooms.

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* "Early" here simply means the youngest group; these children were not early in relation to the entrance age requirement.

1.2 Performance of younger children in Boulder Valley schools

The existence and extent of age-effects was examined for Boulder Valley school children using CTBS reading and math achievement scores and teacher ratings of first graders. Are the children who are youngest in their grade behind their classmates in achievement? Several different analyses are shown for grades one, three, and four in Figures 1.1 to 1.14. The data for first grade were available only for the 10 schools described in Chapter 2 because birthdate information is not routinely collected for first graders. In grades three and four, data for the entire district were used.

In first grade, looking at the age trend for both reading and math scores (Figures 1.1 and 1.3), older children (up to the point of being over-age) tend to do slightly better. For example, in reading children in the youngest three months have mean scores at the 62nd percentile compared to the oldest three-month children who are at the 71st percentile. (In math, the difference is only six percentile points.) The nature of the age trend is further illuminated in Figures 1.2 and 1.4 where reading and math scores are plotted by age but with the 75th, 50th, and 25th percentile points identified for each age group. From these graphs it is clear that there is virtually no age effect for children at the 75th and 50th percentiles of their respective age intervals. In other words, the children who are in the more able half of the young group achieve just as well as the more able children in the older group. However, at the 25th percentile the age effect is more pronounced. Thus, the disadvantage in achievement experienced by some younger children in relation to older classmates appears to be a combination of youngness and low ability.

Because the number of children in the first tenth of the year was so few compared to the other age intervals, it seemed possible that the age-effect could be partly obscured if "unready" children were systematically eliminated from the data either because of parent or school decision. To control this confounding factor, the data were examined separately for high retaining and low retaining schools (Figure 1.5) since there would not be such a problem with missing cases in low retaining schools. Indeed, with slightly more uniform distribution of data across the age groups in the control schools, the difference between the oldest and youngest children appears greater. However, the mean difference between the oldest and youngest children is still only six percentile points.

In Figure 1.6, teacher ratings of first-graders at the end of the school year are plotted by age at entrance. Teachers rated all the children in their class (compared to each other) on reading and math achievement, social maturity, and learner self-concept. Again, an age effect is evident but is not pronounced.

All of the first grade graphs show a steep drop-off for the performance of older-age children. In these data, children who were six and older when they started kindergarten were either retained their first year of kindergarten or their parents held them out of school. Although the children with September birthdays (age 6.0) tend to be close to the achievement of the oldest normal-age children in the class, there is a sharp decline in achievement for the over-age children. Thus, it is very likely that these children were selected to be held back not just because they were young but because they were also low in ability. In any case, the fact that the curves do not continue to climb indicates that retention (or waiting) does not guarantee above average achievement.

Consistent with other research studies, there is no age effect by the third grade. The children who entered kindergarten when they were 5.0 (September birthdays) are no different in achievement from children who were nearly six (5.11, October birthdays). In Figures 1.7 and 1.8, reading test scores are plotted by age at school entrance. Again to look for any hidden effects in subgroups by age, Figure 1.8 shows the trends at the 75th, 50th, and 25th percentiles, while Figure 1.7 shows the trend in the means by age. The same device was used in Figures 1.9 and 1.10 to study the trends in CTBS math scores by age at school entrance. All of these lines are essentially flat (between 5.0 and 5.11). The youngest children do as well as the oldest children in both reading and math. For over-age children, the drop-off in achievement is more precipitous.

Again, to check for the possibility that real age-related effects are missed because of the selective attrition from the first three month age intervals, data from the seven schools in the district with the lowest retention rates (K-3) were analyzed separately. These data are presented in Figures 1.11 and 1.12 for third grade reading and math respectively. From the reported sample sizes (n=20, 22, etc.) it is apparent that we were correct in assuming that these schools would not be missing proportionately as many of the youngest-age children. Even with a more complete (and therefore unselected sample) of the youngest children, there is no apparent relationship between age and achievement.

Lastly, at fourth grade, the reading and math achievement scores presented in Figures 1.13 and 1.14 show no superiority in achievement for children who are oldest in their grade. Thus, the Boulder data are entirely consistent with the age-effect results from existing research studies. Youngest age children are at a slight disadvantage in first grade achievement. By third and fourth grade this effect has entirely disappeared. The youngest children are no different from the oldest children in a grade.

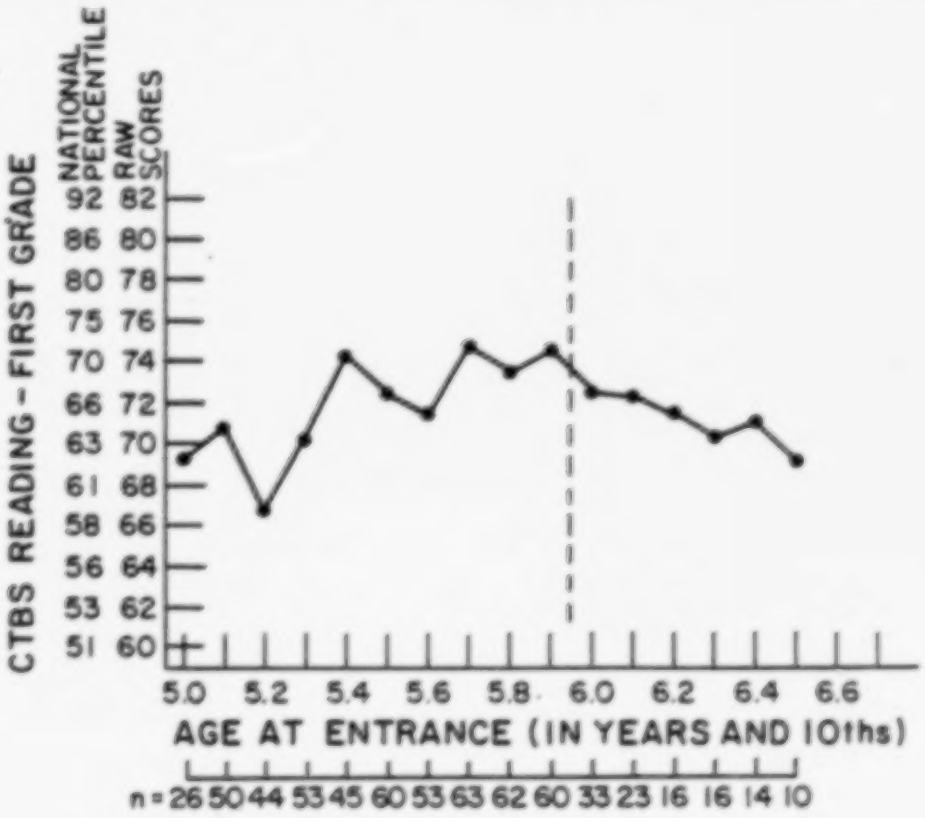

Figure 1.1 Mean CTBS Reading Achievement by Age in First Grade

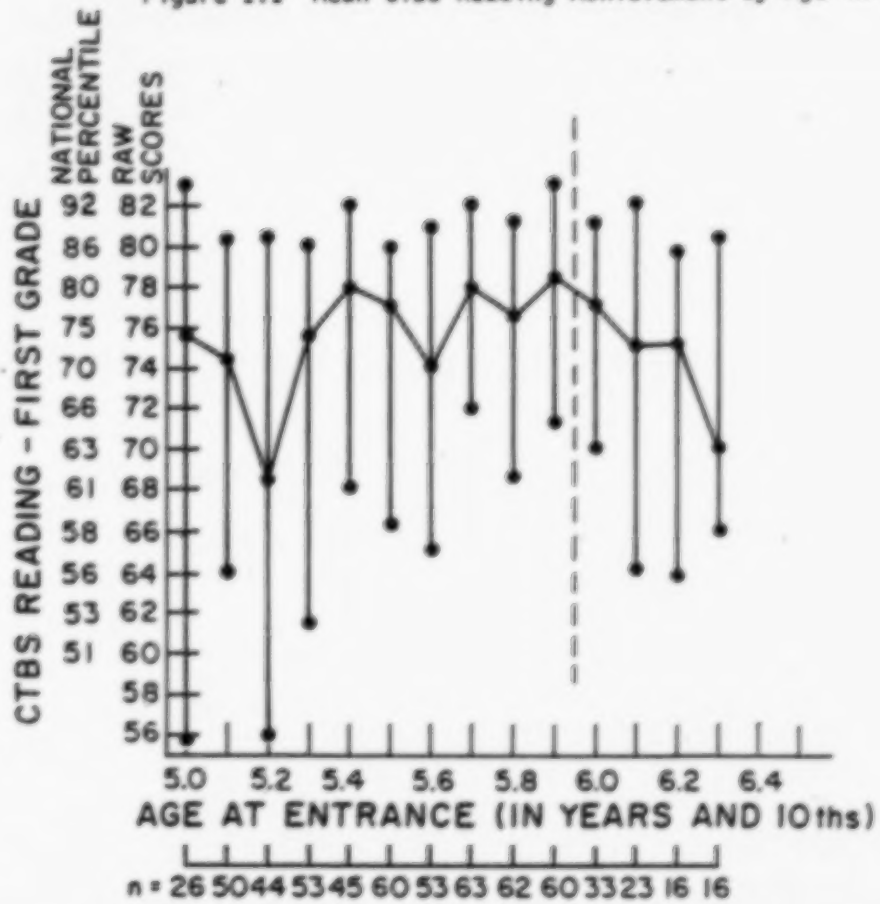

Figure 1.2 Median (and P_{25} and P_{75}) CTBS Reading Achievement by Age in First Grade

Figure 1.3 Mean CTBS Math Achievement by Age in First Grade

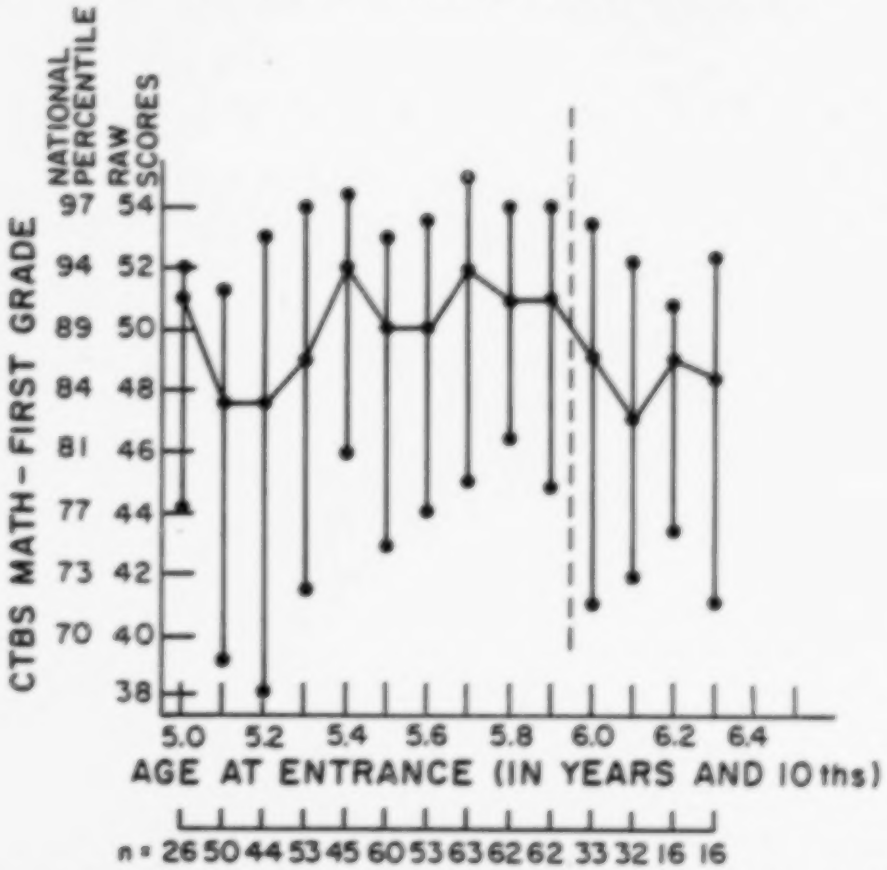

Figure 1.4 Median (and P_{25} and P_{75}) CTBS Math Achievement by Age in First Grade

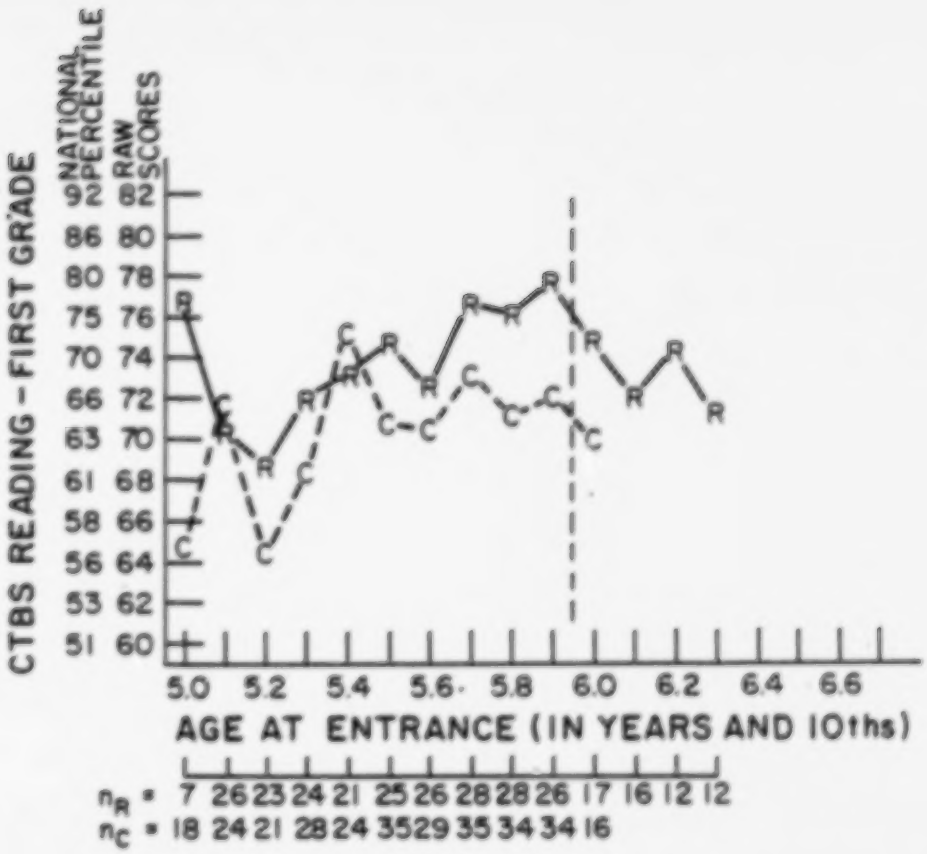

Figure 1.5 Mean CTBS Reading Achievement by Age in First Grade for High Retaining and Control Schools

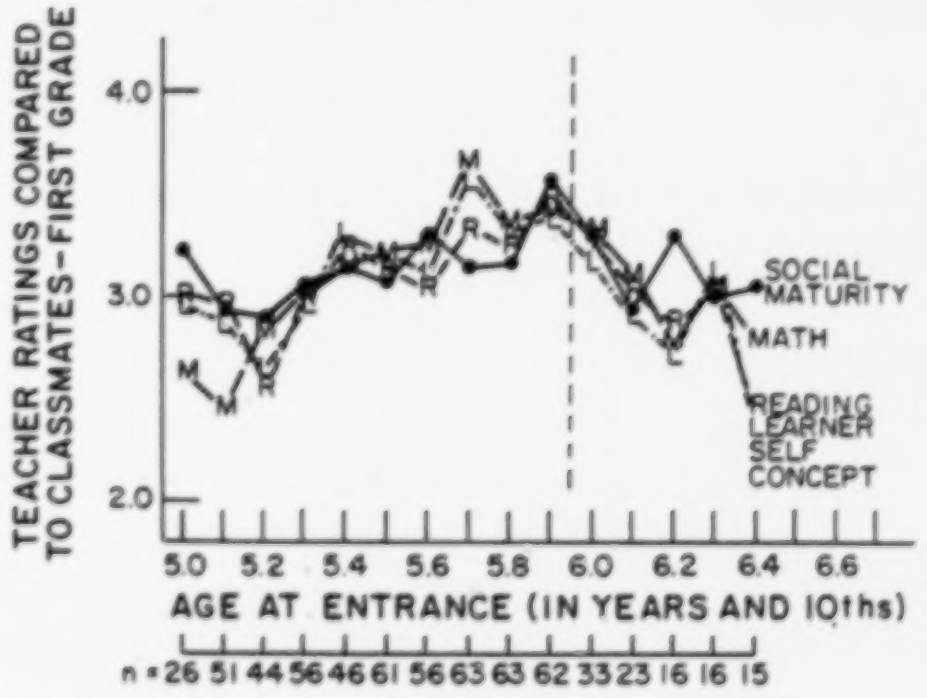
TEACHER RATINGS COMPARED TO CLASSMATES - FIRST GRADE
4.0
3.0
2.0
SOCIAL MATURITY
MATH
READING
LEARNER SELF CONCEPT
5.0 5.2 5.4 5.6 5.8 6.0 6.2 6.4 6.6
AGE AT ENTRANCE (IN YEARS AND 10ths)
n = 26 51 44 56 46 61 56 63 63 62 33 23 16 16 15

Figure 1.6 Mean Teacher Ratings by Age in First Grade

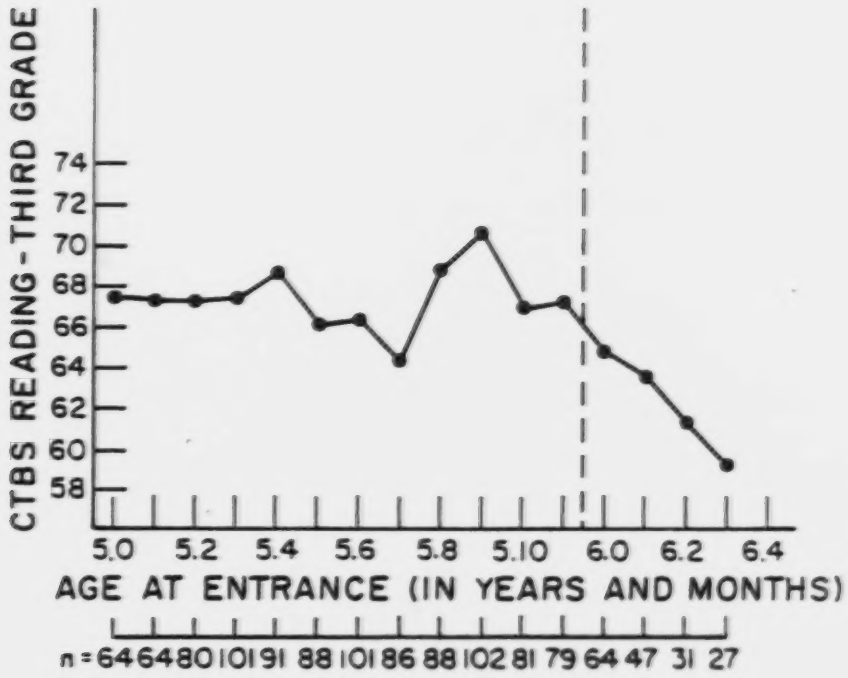

Figure 1.7 Mean CTBS Reading Achievement by Age in Third Grade

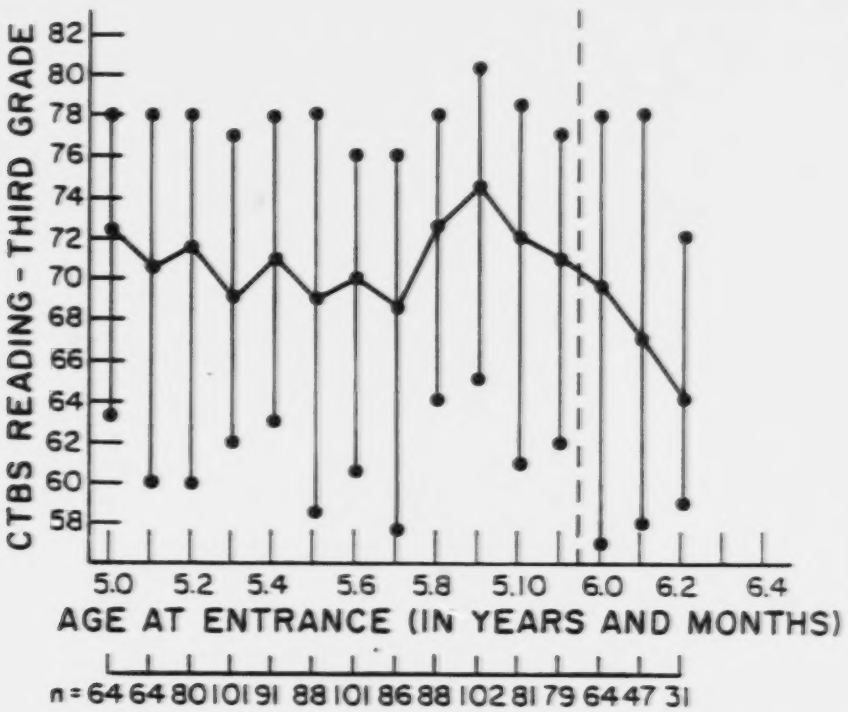

Figure 1.8 Median (and P_{25} and P_{75}) CTBS Reading Achievement by Age in Third Grade

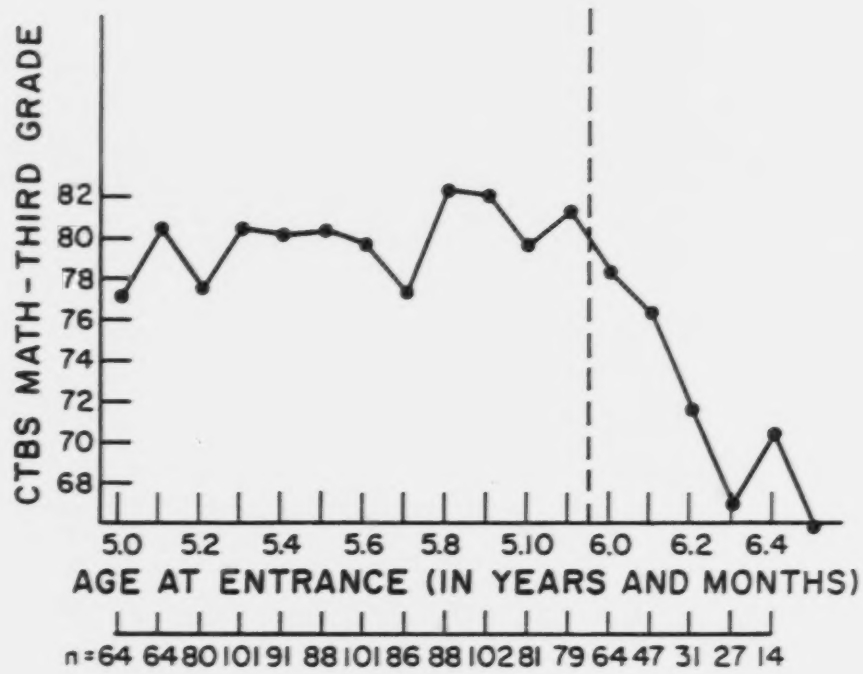

Figure 1.9 Mean CTBS Math Achievement by Age in Third Grade

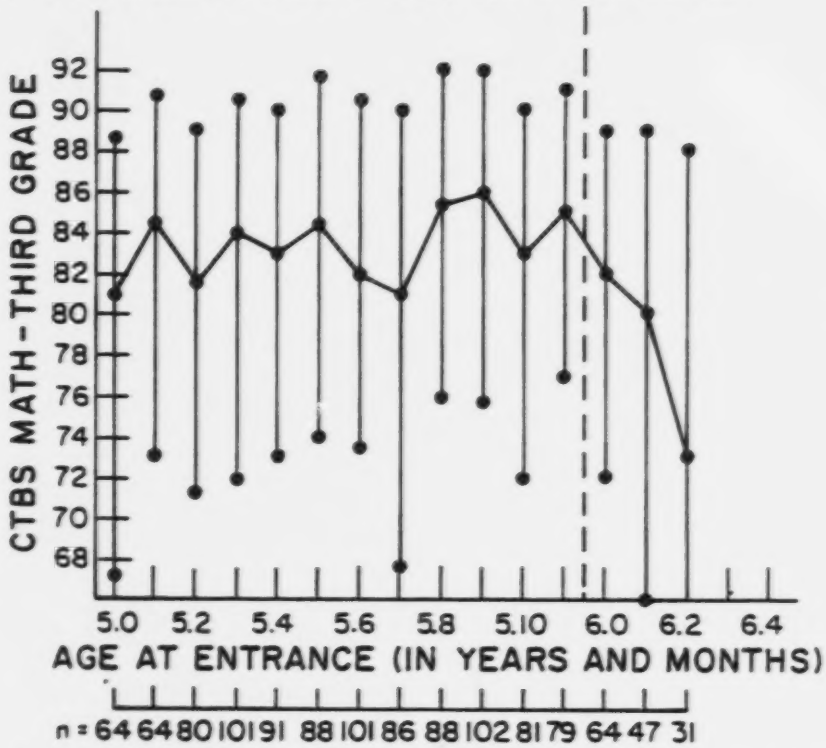

Figure 1.10 Median (and P_{25} and P_{75}) Math Achievement by Age in Third Grade

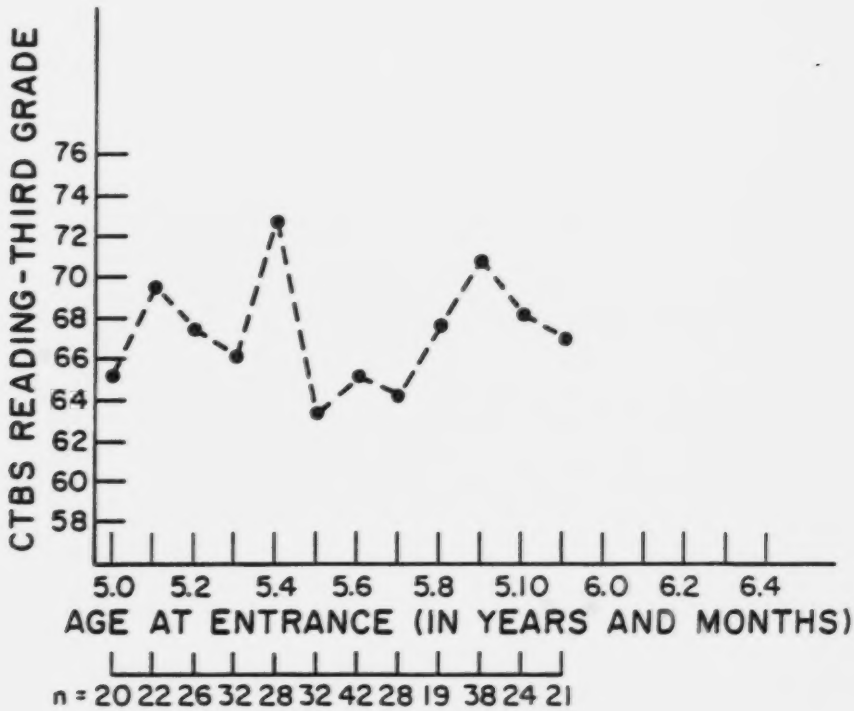

Figure 1.11 Mean CTBS Reading Achievement by Age in Third Grade in Low Retaining Schools

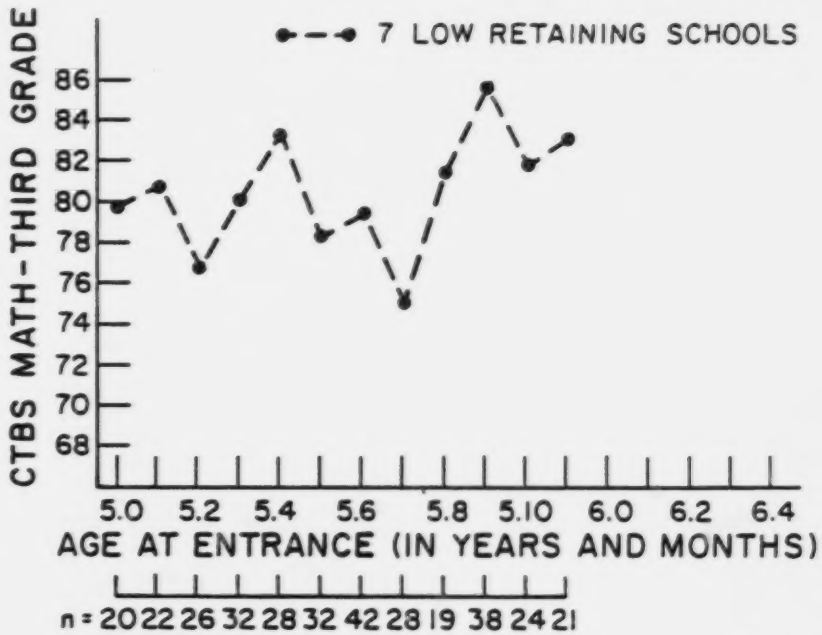

Figure 1.12 Mean CTBS Math Achievement by Age in Third Grade in Low Retaining Schools

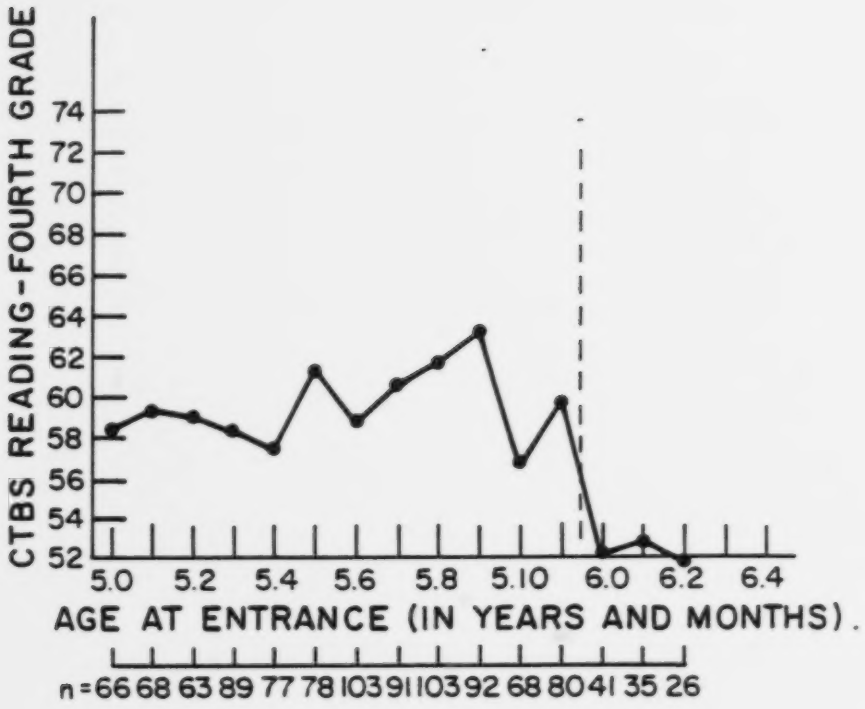

Figure 1.13 Mean CTBS Reading Achievement by Age in Fourth Grade

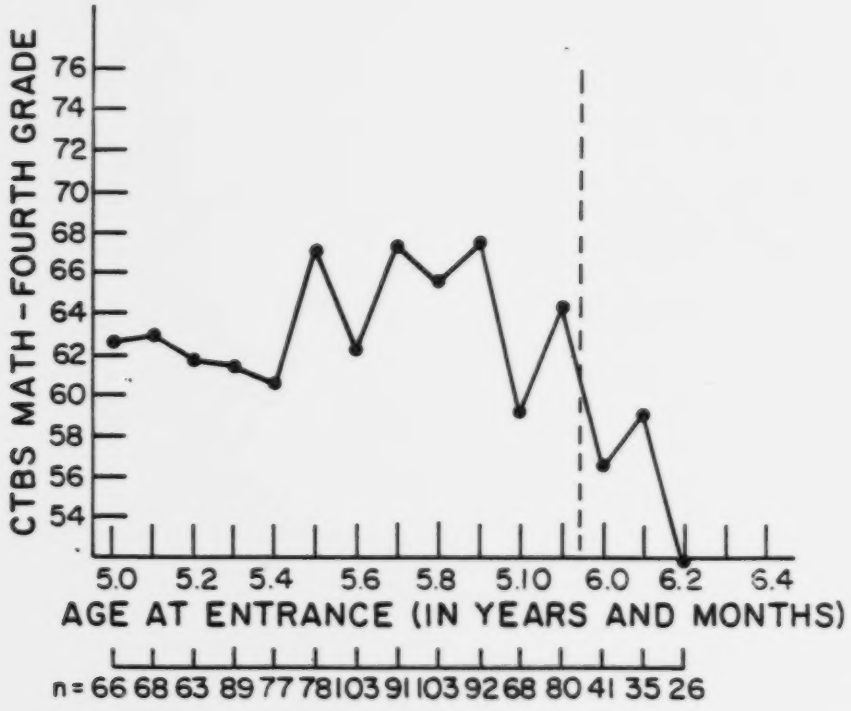

Figure 1.14 Mean CTBS Math Achievement by Age in Fourth Grade

1.3 Age effects are all "relative"

Studies showing younger first graders at a disadvantage compared to older children in the same grade are used to argue for raising school entrance age and to support Gesell policies of retention in kindergarten or staying home a year (e.g., Ames, 1966; Ilg & Ames, 1978). However, one must bear in mind that the age effects are entirely relative. The youngest children are at a disadvantage whether they entered school at 4.7 in a district with a February cut-off, at 4.9 in a district with a December entrance age, or 5.0 in a district where September 1 is the deadline. Several authors have pointed out the absurdity of seeking an "optimal" age for first-grade readiness if the children who are the "successful" group in one context are the "young-unsuccessful" group in another district only because of their relative age in comparison to their respective classmates (Gedler, 1975; Weinstein, 1968-69).

The relative nature of the age effect is also seen between countries. The International Study of Achievement in Mathematics (Husén, 1967) found that "children with birthdays toward the end of the school year tend to do less well in all countries." (p. 228). This was true in England where the mandatory age of school entry was five and in Finland and Sweden where compulsory attendance does not begin until age seven. To contest the idea that older entrance ages would be a panacea for differential readiness, Gredler (1975, 1980) cited several studies including those by Malmquist (1958) and Jinks (1964). Speaking of seven-year-olds in Sweden, Malmquist commented that large differences in intellectual development made it impossible for the same method of teaching to be effective with all the pupils. In a British study, Jinks (1964) again found that teachers praised the learning abilities of their older pupils, who would have been the youngest children in the United States.

The entrance ages throughout the United States vary by at least six months. There has been a trend nationally, in part influenced by the Gesell philosophy and readiness issues, to raise the required age (Gredler, 1975). Despite the shift making kindergarteners older now, authors Ilg and Ames of the Gesell Institute have not changed their statements that a substantial proportion (from one-third to one-half) of children are overplaced in school. In the "Gift of Time" brochure, distributed in some Boulder schools, parents are warned that children with September, October, and November birthdays may not be ready for the demands of school. Does this mean that given Boulder's higher cut-off (September 30) that only the September children are at risk? Or, is the argument shifted then to apply to August and July birthdays? In a survey of Colorado school districts (Management Information Services, 1982), Windsor reported a four-year plan to raise the entrance age a month each year to reach June 1 by 1985; they use the Gesell developmental test and place children who have had kindergarten in another district in a transition program before first grade. Ilg and Ames never explicitly acknowledge that being too young for a grade is a relative problem except that in other contexts Dr. Ames has said that an ungraded curriculum would be another way to deal with individual needs. None of the advocates for higher entrance age or wait-a-year policies discuss the problems of the new group of children who will then be the youngest.

1.4 Other factors

The age effect (within grade) is much smaller than the achievement and readiness differences due to socio-economic status (SES). For example, in the Langer et al. (1984) study where relative age was correlated .05 with later

school successes, home environment factors and parents' education both correlated .20 with nine year olds' test performance. Similarly, Pringle (1966) found that differences in percentages of children classified as good readers were three times as great for different SES groups than for young and old groups in grade. Although Boulder County is much more homogeneous than the nation in socio-economic status, it is still unlikely that the variability due to age would equal the variability due to family background. Therefore, children are much more likely to be "unready" for school because their parents have less education than because they are "young."

It may be acceptable to keep children out of school or retain children who are "too young." It is not defensible (nor legal) to exclude children from school who are from lower SES and minority groups. (The correlation between developmental measures, IQ, and SES are discussed in the section on Gesell test validation.) Arthur Jensen's (1969 b) paper is cited by the Gesell Institute (Annotated Bibliography, undated) in support of the theory that "formal instruction (should) be delayed until readiness is achieved." Yet in that paper Jensen did not in fact suggest that children be held out of school, since some groups of poor and minority children are slowest in mental development. Rather, he argued that instruction be modified to be more in keeping with what individual children are ready for, and that more demanding cognitive skills not be introduced too soon for fear of "turning off" less able learners.

Ames (1966) has also recommended a higher entrance age for boys since they are by her calculations six months slower. Although there is ample evidence that boys mature more slowly than girls, the effect is actually smaller than the within-grade age effect. For example, in a study involving more than 2,000 kindergarteners, boys were .29 standard deviation units behind girls, but children in the youngest three months were .63 standard deviation units

behind the oldest group (Corney & Shafer, 1979). Of course, the presence of young boys in the same class with older girls is an additive effect, exaggerating the heterogeneity of the group. The Civil Rights Act and legal guarantees to the handicapped would make it illegal to set a separate cut-off date for boys.

1.5 Reconceptualizing the problem

In the "Gift of Time" (1982), it is stated that "at least 33% of five-year-olds are not ready for the standard kindergarten" (p. 6). The Gesell brochure recommends these alternatives for a child who is chronologically five:

1. That the child attend Kindergarten.
2. That two years (not one) are needed before first grade. The child may achieve the extra year by:
   a. Attending a pre-Kindergarten for one year followed by kindergarten the next year, or
   b. Spending two years in Kindergarten, or
   c. Staying at home a year and coming to Kindergarten the next year, or
   d. Attending kindergarten and then a pre-First grade class.
3. That the child may have special learning needs. In such a case an in-depth evaluation will be recommended in order to obtain further information.

In the preceding sections we have been critical of the Gesell perspective because proponents fail to realize that the problems of the youngest children in kindergarten and first grade are relative (i.e., when the youngest children are removed a new group of children are then "the youngest"). However, the Gesell authors may be correct that in some kindergartens the curricular demands are too great for many five-year-olds.

To present the case supporting the Gesell position, it is necessary to disagree with them regarding one further assumption. They believe there is a "standard kindergarten" not only across the country but across time; in 1982 they said one-third of five-year-olds were not ready, the same figure was cited in 1966 (Ames, 1966, p. 3). Yet there have been profound changes in early childhood education in the past 20 years. Dr. Ames does not have a research base for her statements except New Haven norms (that have not been updated for five-year-olds since the early '60s) and a clinical population of referred clients. Today the majority of children attend preschool or child care outside the home (Fiske, 1984). Entrance ages have been raised so that children are three months to six months older when they start kindergarten. There is every reason to believe that there has been an increase in the curricular demands of kindergarten in response to the now apparently more ready and older children. For example, evaluations of Sesame Street have verified an increase in alphabet and number knowledge among three-, four-, and five-year-olds with especially large gains for middle-class children (Cook, Appleton, Conner, Shaffer, Tamkin & Weber, 1975).

Thus, we agree with the Gesell authors that many five-year-olds may face school expectations that are inappropriate for their developmental level, not because there is a constant or "standard kindergarten" but because there is a constant process that continually escalates the expectations based on what the oldest children can do. This concept of "escalating standards" was implicit in Gredler's (1981) analysis of the relative problem of young fives in England and young sevens in Sweden:

> If younger children are "at risk" in all these classrooms, it indicates that the teachers are using standards of instruction consciously or unconsciously which apply mainly to their older group. (p. 104)

Similarly, Greeno (1978) acknowledged the phenomenon of "accelerated curriculum" in the upper grades: "the content of the curriculum is not set on the basis of some a priori standards, but is influenced by experience with what students can achieve successfully" (p. 71).

There is also evidence from sociological analyses of schools as organizations suggesting that when teachers are faced with a diverse (unselected) group of students and accountability demands, teachers will act in ways that reduce heterogeneity and shift responsibility for deviant cases (Gredler, 1975). Carlson (1964) suggested that "segregated" classes are an adaptive response to too great a range of individual differences. Historically "tracking" (homogeneous ability grouping) and special education classes were instances of this type of segregation; Gredler (1975) noted that now pre-first classrooms serve this same purpose. Anderson (1967) referred to "procedural displacement," the process whereby school personnel develop mechanisms to channel problems away from the regular classroom. The group that can readily do the work defines normality and the others are defined as deviant, but "no matter how many special classes or groupings there are" the search to separate more children from the normal group continues (Gredler, 1975, p. 201).

The demands of kindergarten may be increasing nationally in response to an older population with more preschool experience. As kindergarten becomes more like first grade, the task demands are indeed inappropriate for the developmental level of some five-year-olds without much preschool. Raising the entrance age or retaining the youngest children perpetuates the problem because teachers constantly focus on the older group to define expectations.

For solutions to be effective, they must stop the escalation of demands in kindergarten and address the range of individual differences found in any group of children.

1.6 Entrance Age Summary

- Numerous studies find that the youngest children in first grade are at a disadvantage compared to older children on school achievement measures.

- This "age-effect" is relatively small (about 9 or 10 percentile points) and tends to disapper in later grades. The lower achievement of the younger children especially seems to disapper in programs that accommodate to individual differences.

- Boulder data are consistent with this picture from national studies. A difference of six to nine percentile points (math and reading, respectively) exists between the very youngest and older first graders. The differences disappear entirely by third and fourth grades.

- The age effect is relative. The youngest children are worse off in all districts (and across 30 years of research) whether the entrance date is February 1 or September 1. The relative age effect is also found in all countries whether the compulsory attendance age is 5 or 7. Advocates of raising the entrance age or holding children out of school do not address the problem of what will happen to the new "youngest" group.

- Nationally, initial differences in readiness for school learning are three or four times greater for different socio-economic groups than for young and old children in the same grade. No one suggests that poor or minority children should be held out of school. Yet, even in a more homogeneous, high SES context like the Boulder Valley, differences in family background explain more of the differences in school readiness than age within grade.

- Although the sex effect is less than the age effect, boys do mature more slowly than girls. The two effects together (young boys in the same class with old girls) exaggerated the heterogeneity of the group. The Gesell Institute (Ames, 1966) has recommended a higher entrance age for boys, but such a provision would be in violation of the Civil Rights Act.

- There is a problem of "escalating standards" whereby kindergartens become more and more demanding in response to an older population with more preschool experience. As kindergarten expectations begin to look more like the expectations for first grade, some five-year-olds may not be ready. Raising the entrance age or retaining children perpetuates the problem since standards are continually raised on the basis of what the older children can do. Only solutions that address excessive demands and the range of individual differences are likely to be effective.

PHILOSOPHIES ABOUT READINESS AND LEARNING

Directors and staff from the Gesell Institute of Human Development emphasize that what they have to offer educators and parents is not just a test of school readiness but a complete philosophy regarding child development and school learning. Although their views are expressed in dozens of books published by Drs. Ilg and Ames and others from the Institute, their viewpoint is encapsulated by this excerpt from the Gift of Time (1982):

> Developmental Point of View...
>
> The Developmental Point of View maintains that behavior is a function of structure and that growth is orderly, structured and predictable. Each child will go through a somewhat predictable cycle of developmental stages. In this respect each child is like every other child.
>
> However, every child has a rate or pattern of growth particular to himself. In this way each child is different from every other child.
>
> The Developmental Point of View requires that we view children as total beings. The physical, social, emotional and intellectual aspects of development depend on and support each other. These aspects are not separate and one should not be pushed ahead of the others.
>
> The Developmental Point of View means appreciating that readiness for any task has its roots in the biological/maturational makeup of the child. We cannot produce, speed up or ignore readiness. When children are ready, and only then, will they walk, talk, read and perform other academic functions with ease.
>
> The Developmental Point of View suggests looking at where children are now, not where we think they should be.
>
> School Readiness...
>
> School readiness is the ability to cope with the school environment physically, socially and emotionally as well as academically and intellectually, without undue stress.
>
> Children who go to school before they are mature enough to cope may suffer for the rest of their lives for this one mistake in timing.

> When determining school readiness, there are several factors to consider. For many years, only a child's chronological age was considered in deciding the time of school entrance. Size and language development are two other areas which have often been used as indicators of readiness. But to view a child from only one or two perspectives gives us only a partial picture of the developmental level. A high intelligence or advanced reading ability may be no more a guarantee of readiness for kindergarten than being five years old or tall for one's age.

There are other theories of cognitive development and research findings that are not necessarily consistent with views that guided Arnold Gesell's work in the 1930s and 1940s. As Jensen (1969 b) noted, there can be no dispute about the fact of readiness (or differential readiness). But there is vast disagreement about the implications for educational practice because of such different conceptualizations of the nature of readiness. Simplistically, if you believed that readiness was learned, you would try to teach it; if you believed it was inborn, you would give it time to emerge. To understand the Gesell maturational perspective, it would be helpful to contrast it with other major models of psychological development. In providing this brief summary, we follow the schema given by Kohlberg (1968). Kohlberg is a developmentalist but his views diverge from those of Gesell; nevertheless his work is cited by staff at the Institute as compatible with their own.

1.7 The Gesell maturational theory

Today all psychologists acknowledge the joint influence of hereditary and environmental factors on cognitive development. However, the Gesellian view may be characterized as placing relatively more emphasis on the biological or inborn aspects of development. Thus, their philosophy is usually called maturational or nativistic. According to this view, all children pass through the same developmental stages, but the rate at which they progress is governed

by an internal clock. The role of the parent (or educator), then, is to watch and respond to this unfolding, predetermined, and inherited pattern. Jensen (1969 b) characterized this theoretical perspective, like his own, as the "growth-readiness" view of mental development:

> It is associated with such eminent psycholgists as G. Stanley Hall and Arnold Gesell, and it holds that certain organized patterns of growth of neural structures must occur before certain experiential factors can effectively contribute to development. The rate of intellectual development is seen as due primarily to internal psychological mechanisms and their orderly, sequential growth, rather than to inputs from the environment. (p. 2)

Furthermore, because of the internal governance of learning ability, attempts to teach or accelerate the developmental process will not only be ineffective but may actually be harmful. Because the organism grows as a whole, "the effort to teach or to force early maturation in one area will either be ineffective or will disrupt the child's total pattern and equilibrium of growth" (Kohlberg, 1968, p. 1019). This tenet is also the basis for the statement that some children are not ready for kindergarten, even if they are already reading. Just because a child's intellectual development is accelerated does not mean that her or she is equally mature in other areas.

In an evaluation of Gesell's maturational theory, Crain (1980) reached these conclusions:

> Most contemporary psychologists would consider Gesell's maturational position too extreme. Most psychologists acknowledge the role of maturation but nevertheless believe that teaching and learning are much more important than Gesell claimed. They believe that the environment does more than merely support inner patterning; it also structures behavior...
>
> The most frequently voiced criticism of Gesell centers on his manner of presenting age norms. As mentioned, his norms imply too much uniformity and give us no idea of how much variation to expect at any given age...

There is also some evidence, still only impressionistic and anecdotal, that things can go very wrong when Gesell's principles are excessively violated. (For example, the history of a schizophrenic patient revealed toilet training at six months)...

However, this also is evidence which might argue partly against Gesell. In particular, research by Baumrind (1967) suggests that independent, self-reliant, and mature three- and four-year-olds have parents who demand a great deal of them...

All the same, it would seem that we have much to gain by listening to Gesell. For while it is true that we must control, direct, and instruct or children to some extent, we usually seem to be in quite a hurry to do these things. What seems more difficult for us is to take the time to watch, enjoy, and appreciate our children as we give them a chance to do their own growing. (pp. 30-31)

1.8 Environmental-Learning theories

An opposing theory is offered by the environmentalists or behaviorists represented by Skinner, Hull, Pavlov, and J.B. Watson. Of course,. these psychologists acknowledged hereditary factors as a source of individual differences, but they placed greater emphasis on the role of environment in shaping behavior. Focus on external factors and acquired behavioral development led to a stimulus-response conception of how learning takes place (i.e., how the organism is shaped from outside). As noted by Kohlberg (1968), "Almost of necessity, the view that the structure of the external world is the source of the child's cognitive structure has led to an account of the development of structure in associationistic terms...(E)nvironmentalists have viewed the structure of behavior as the result of the association of discrete stimuli with one another, with responses of the child, and with experiences of pleasure and pain" (p. 1019).

Most educators are familiar with reinforcement conceptions of learning but may tend to associate this model more with basic skills acquisition than with

the development of complex cognitive processes. However, the environmentalist position refers to the development of mental structures as well as the learning of discrete bits of information. Learning of more complex concepts merely requires learning of prerequisite associations and generalization of existing responses. Most hypotheses offered to explain slower cognitive development among children from poor families adopt the environmentalist perspective. Children raised in poverty are not just missing facts, such as knowing the alphabet, but have not "learned how to learn." That is, because of inadequate mediated learning, they are not so far along in developing hierarchically ordered cognitive structures.

From the environmentalist perspective the role of the teacher is not to wait but to identify desired outcomes and the intermediate steps to that goal. There is also incentive to start education early since early learning facilitates later learning. Gagnes' (1968) model of "cumulative learning" and Bloom's (1976) mastery learning share this view of education.

Although the nature-nurture debate is now nearly passe among psychologists, the environmental position has gained considerable ground over the past 20 years probably because the hereditarian position had been so extreme. For example, estimates about the extent to which intelligence is determined genetically have been revised downward from 80% (Jensen, 1969 a) to 50%-70% (Jensen, 1980) to as low as 20% (Taylor, 1980). In an otherwise negative review of mastery learning, Arlin concluded that, "Mastery strategists have provided overwhelming evidence that it is possible to raise achievement of "poorer" students to levels that many would have considered unattainable" (1984, p. 80).

Still, the behaviorists and environmentalists have fallen short of their claim that the developing human intellect is largely plastic and malleable. Many projects undertaken in the 1970s to boost intellectual development or improve school readiness (e.g., the Milwaukee project, Head Start) did not have lasting effects on school environment (see Jensen, 1981) (some say because of continuing environmental factors). Although mastery learning programs have demonstrated success with discrete curricular areas, there is no evidence that "anyone can be taught anything" or that individual differences in learning ability have been eradicated. Individual differences in what used to be called "intelligence" are still manifest in time required to learn and in amount of generalization and transfer (see Arlin, 1984; Greeno, 1978). Most psychologists would agree that even when you can get a much younger child to mimic the achievements of an older child the mental processes represented are probably not the same. Jensen (1969 b) used the example of a three-year-old learning to read. The child may indeed read words but generalization from familiar to unfamiliar words would not be the same, nor would comprehension.

1.9 Piagetian cognitive - developmental theory

Piaget was perhaps one of the first psychologists to reject the extremism of either the environmental or the hereditarian view. Piaget's conception of development was what Kohlberg (1968) called "interactional." By this he did not mean a superficial quantitative model where both genetics and environment each contributed units (or variance) in mental ability, but rather a truly interactional and reciprocal combining of effects. "This interaction leads to cognitive stages, which represent the transformations of simple(r) early cognitive structures as they are applied to (or assimilate) the external world

and as they are accommodated to or restructured by the external world in the course of being applied to it." (Kohlberg, 1968, p. 1021).

Advocates of the Gesellian position often use Piaget's theory to support their own, since both are "developmental" theories. Although the two models share the assumption that development procedes through a fixed sequence of stages, the Piagetian view allows that development in a given stage can be speeded up or impaired by experiential factors. The Gesell annotated bibliography summarizes Kohlberg's paper (1968) by saying he "emphasizes (that) acceleration of cognitive development is not possible or even desirable." (P. 4) However, Kohlberg draws this distinction:

> While the developmental and the maturational view may practically agree on the relative futility of early specific training of a function, the developmental view sees specific training as failing primarily because it cannot make up for the age-linked general experiential lacks of the young rather than because it cannot make up for his neurological immaturity. (p. 1030)

Kohlberg was speaking in the context of preschool education and made it clear that you could not take an "innately" bright child and teach him things way beyond his assimilated experience. For example, Kohlberg criticized the Bereiter and Englemann program (in the behaviorist tradition). They were able to bring preschoolers to a first-grade level on standardized tests yet the children were not necessarily able to identify "more candy" for themselves on a conservation task. From the ineffectiveness of acceleration, however, it does not follow that instruction should be withheld from a normal child until a new stage is reached. Experience fosters development as the child assimilates and eventually transforms external structures (knowledge, relations, etc.). Kohlberg was, in fact, very accepting of various cognitive-stimulation programs, including early reading if it capitalized on preschoolers' desire to do "big-kid" stuff.

1.10 Summary of Readiness Philosophies

The behaviorist and Gesellian positions represent extremes on the environmentalism-hereditarian continuum. More modern conceptions of cognitive development have replaced these theories and are interactional or even transactional (i.e., the individual's growth is not only influenced by the environment but also acts to alter the environment in turn). Most developmental psychologists today would reject either the simplistic notion that "any one can be taught anything if the task is broken into small enough pieces," or that what a child can become is only biology, unaffected by experiences and opportunity to learn.

More recent research based on Piaget's conception of development (which differs from Gesell's) gives more importance to learning experiences in determining the rate of development. Based on what we now know about learning and development, it is clear that children should not be pushed way beyond their developmental level (even if a three-year-old learns to read, it is not the same cognitive process as in a six-year-old). However, it is also ill-advised to withhold instruction or "teach down to" children who are developmentally young. Cognitive stimulation is essential for children to progress from one developmental level to the next.

THE GESELL SCHOOL READINESS TESTS

The Gesell School Readiness Tests are also called the Gesell Developmental Tests or Behavior Tests. They are intended to assess a child's developmental age, which is an interdependent composite of social, emotional, intellectual, and physical functioning (Ilg, Keirns & Iba, 1982). There are actually two different versions of the test, one called the Gesell School Readiness Screening Test (GST) and one, the Gesell School Readiness Test (GSRT). The Screening Test is typically used with 4 1/2- and 5-year-olds for screening into kindergarten. The Readiness Test (GSRT) is the more complete, longer version which would more probably be given to children being considered for retention at the end of kindergarten.

A cardinal rule in the evaluation of assessment instruments is that technical properties such as reliability and validity should always be determined in the context of the specific use intended. Tests of a given name

do not have validity for all possible purposes. In the following sections, the technical properties of the Gesell tests are evaluated presuming that the instruments will be used to place a child in a two-year kindergarten program (or advise the parent that he should wait a year) or to retain a child in kindergarten or place him or her in pre-first. Other uses, such as guiding instruction within a kindergarten class, are mentioned but are not the focus of the review. To judge the reliability, validity, and adequacy of norms for these purposes the Gesell tests are compared to the Standards for Educational and Psychological Tests prepared by the American Psychological Association, the American Educational Research Association, and the National Council on Measurement in Education (1974). In addition to the discussion of the tests' psychometric properties, consideration is also given as to how the tests might be judged as clinical instruments.

1.11 Reliability

Test authors are required to supply evidence of a test's reliability, i.e., how stable or dependable scores are for an individual examinee.

> The test manual or research report should present evidence of reliability, including estimates of the standard error of measurement, that permits the reader to judge whether scores are sufficiently dependable for the intended uses of the test. If any of the necessary evidence has not been collected, the absence of such information should be noted. (Standards, p. 50)

This standard is designated as "essential." The Gesell tests fail this standard because the published documentation (Ilg et al., 1982; Ilg, Ames, Haines & Gillespie, 1978) does not contain reliability data nor is the omission acknowledged with appropriate cautions for test use.

Furthermore, in the numerous studies using the Gesell tests (cited later under predictive validity and retention research), only one study ever reported a reliability coefficient. Based on 103 kindergarteners, Kaufman (1971) reported an internal consistency value of .84.* This coefficient is approaching the minimum acceptable level; Salvia and Ysseldyke (1981) as well as other measurement specialists require reliabilities of .90 or higher for tests used in making important placement decisions; other test uses such as research or program evaluation do not require such a high level of accuracy.

Although reliability in one study is approaching an acceptable level, it should be noted that Kaufman imposed a numerical scoring scheme because "the unsystematic clinical method used to score GSRT was not suitable for rigorous psychometric analysis." (Kaufman & Kaufman, 1972, p. 524). Using more usual scoring methods, reliability would probably be lower. Even given a reliability of .84, the corresponding standard error of measurement was 5.3. On Kaufman's scale this meant that if a child was given a developmental age of 5 (DA), the 95% confidence would include not only 4 1/2-5 and 5-5 1/2 (4 1/2 with some evidence of 5, and 5 with some evidence of 5 1/2) but also fully 4 1/2 and 5 1/2. Since the 95% confidence interval extends over a developmental age span of an entire year, the instrument is not accurate enough to distinguish between children who are developmental 4, and hence not ready for kindergarten, and those who are 5.

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* Internal consistency estimates are impoverished indices of reliability. Inter-judge reliabilities are essential to assess decision accuracy. Kaufman also reported an inter-judge correlation of .87 on a subsample of cases. More of this kind of evidence is mandatory to defend the use of the test.

1.12 Norms

Information on the norming samples for the Gesell School Readiness Test is given in School Readiness (Ilg & Ames, 1965, 1972; Ilg, Ames, Haines & Gillespie, 1978). Since the Screening Test is a subset of the complete GSRT and norms are only given at the item level, one set of normative data applies to both instruments.

The norms for 3-, 3 1/2- 4-, and 4 1/2-year olds are based on 40 girls and 40 boys at each age level who lived somewhere in New England. The sample was chosen to match the distribution of father's occupation in the 1970 U.S. Census, but the actual data on occupational level were not reported. The norms for 5- through 9-year-olds are the original data (50 boys and 50 girls at each age level) collected for the 1965 School Readiness (see Ilg et al., 1978, p. 215) in two North Haven school districts. No new normative data have been collected for five-year-olds since 1960 (see Ilg & Ames, 1972, p. 355).

The Gesell tests have been seriously faulted because the norming samples were not representative (Crain, 1980). Although more of an effort was made to include lower class children in the younger samples, the norms from 5 to 9 were based on "middle-class children in a university setting (Yale)" (Crain, 1980, p. 30). For the sample, Ilg and Ames (1972) reported an average IQ on the California Mental Maturity Test of 117 and predominantly high socio-economic status (SES), but said that both the IQ and SES measures were unfairly high.

In conversation, authors from the Gesell Institute appear to believe that the developmental behaviors measured are so constant that outdated (or unrepresentative) norms are not a problem. "But you know, we have tested thousands of children at every age level and the norms don't change." (Haines,

1985). However, there is evidence in their own work that what six-year-olds can do, for example, in one community is sometimes the same as in another community, but is also sometimes quite different. In some cases children could not do at age seven what children in another group could do at age six (Ilg & Ames, 1972, p. 366). Ames, Gillespie, Haines, and Ilg (1979) compared 1940 norms with "current norms" (apparently referring to unpublished data from the 1970s). If a behavior could be performed by 50% or more of the children in half-year age groupings, they said the norms were "the same." Actual percents were not reported. Because for 28 out of 51 tasks the norms were "the same" by this criterion, they concluded that there was a "remarkable similarity between the responses of the two groups" (p. 174). Yet in the remaining instances the "current group" was six months or more ahead of the 1940 norms. The authors (Ames et al., 1979, p. 176) suggest that the superiority of the present sample might be due to cultural influences such as television. Clearly then the tests do not measure enduring biological traits for which it is immaterial where and when the normative data were obtained. Unrepresentative and outdated norms like those available for the Gesell tests would not be tolerated in standardized tests of intelligence or achievement.

An additional problem in interpreting the normative data is the difference between the 3- to 4 1/2-year-old sample and the 5 to 9 sample. In many cases a difference between what is expected of 4 1/2-year-olds versus 5-year-olds could be an artifact of the norming shift rather than a true indication of developmental stages. The discontinuity is especially noticeable in several tables where 4 1/2-year-olds outperform 5-year-olds (and this is the only break in the otherwise steadily increasing trend). The Gesell Institute believes this phenomena is due to neurological changes in 5 1/2-year-olds that causes them to "lose ground" (Haines, 1985). Measurement specialists would

argue, however, that such hypotheses should not be entertained until the more pressing problem of discrepant samples is resolved. In any case, these irregularities cause further doubt on the ability of the test to label a child as 4 1/2 or 5 developmentally. Note that the test may be reasonably good at ranking a group of children from oldest to youngest, but not necessarily accurate in assigning a specific developmental age to individual children.

The final problem with Gesell norms was explained by Crain (1980).

> Gesell strongly believed in the uniquess of each child. Unfortunately, however, his position was obscured by the way in which he summarized his findings. For example, he wrote about the child at two, two and a half, three, and so on as if we could expect all children at each age to behave in exactly the same way. He did warn that he was using age norms only as short-cut devices (Gesell and Ilg, 1943, pp. 60-61), but he never indicated the actual amount of individual variation that does occur at each age (p. 27).

What Gesell used more vaguely to explain his theory of developmental cycles, Ilg and Ames have now built into a test with greater implied precision. However, because the only normative data are "percent passing" each item, the test authors have no indication of normal range of performance. By implication they expect a child who is developmentally five to get right more than half of the items expected of five-year-olds. (There is not a specific scoring scheme, nor is an average score computed. Examiners are trained "to sense" 5-year-old behavior on the basis of subtest clustering, see Ilg and Ames, 1972, p. 336). Yet because the "norm" is 50% passing an item, <u>many normal fives will miss many "five-year-old items</u>." Because there are no standard deviations, no item- intercorrelations, and no total-score norms, there is no accurate way to know what a number of incorrect responses means. It is conceivable that a child functioning at the 40th percentile of five-year-olds would be labelled 4 1/2 or 4. The authors do not have data on typical variability and do not realize that the age-level distributions overlap substantially.

1.13 Validity

To evaluate the validity of the Gesell tests we will consider two questions: How well do they predict success in first grade and how well do they measure what they are intended to measure, i.e., developmental level*? According to the measurement Standards (1974) these are referred to as the predictive validity and construct validity criteria.

Very little evidence is available about the predictive accuracy of the Gesell tests. Popovics (1982) reported a correlation of .28 between the Copy Forms portion of the test and the Iowa Tests of Basic Skills (some unspecified number of years later). The author concluded that the measure therefore "provided reasonable long-term estimates" (Popovics, 1982, p. 293). This validity coefficient would, of course, be laughably inadequate for individual placement decisions; however, it is clearly an underestimate of the accuracy of more short-term predictions. A more respectable predictive validity correlation of .64 was obtained by Kaufman and Kaufman (1972) between GSRT given in kindergarten and the Stanford Achievement Test at the end of first grade.

Originally, Ilg and Ames (1972) compared developmental test scores in the fall of a given year with teacher judgments at the end of that year. The correspondences were 83% agreement between Gesell results and kindergarten teacher judgments, 68% for first grade teachers and 59% for second grade teachers; Ilg and Ames believed the agreement was better in kindergarten because the teachers were more "objective" about the possibility of retention (p. 26).

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* Note that if the test is supposed to produce a "developmental age" score, the problem of invalid norms arises again. Here we will just consider whether the test measures differences in developmental maturity without a specific age interpretation.

Recently, Wood, Powell and Knight (1984) undertook a study saying that, although the Gesell test is "widely used, it has never been validated" (p. 8). Their "predictive" study had two limitations: the Gesell was administered one to four months after the criterion (and thus should be thought of as a concurrent measurement) and the indicator of "failure in kindergarten" by referral to special education* has the problems of teacher bias or expectation noted by Gredler (1980). Nevertheless, the data given in Wood et al. are useful for examining decision accuracy. That is, how many correct and incorrect decisions would be made if the Gesell tests were used to predict "failure" in kindergarten? The authors reported an agreement rate of 78%; i.e., the test agreed with the teachers' judgments 78% of the time. They also provided information about false positive and false negative errors from which the following table can be constructed.

		KINDERGARTEN OUTCOME		
		Failure	Success	
Developmental Age	Unready (<4.6)	8 (9.3%)	9 (10.7%)	17 (20%)
	Ready (>4.6)	9 (10.7%)	58 (69.3%)	67 (80%)
		17 (20%)	67 (80%)	84 (100%)

Table 1.1 Relation of Developmental age on Gesell to Success and Failure in Kindergarten

* Twenty percent of the kindergarteners were referred to special education, and all were apparently placed since "an IEP was written for them in accord with Public Law 94-142" (Wood, et al., p. 9). This percentage is excessively high since in most schools only 10% of the population are in Special Education. Furthermore, referral does not usually lead to 100% placement.

On the left side of Table 1.1 are the 17 kindergarteners who were actually judged to be failures by their teachers. In the top row are the 17 children declared to be unready by the test. Only eight of the "failures" were correctly identifed by developmental age. At the same time nine children were said to be unready who in fact succeeded; these are the so-called "false negative" errors. Paradoxically, even though the test has what sounds like a reasonable agreement rate, it actually makes as many (or more) wrong classifications of unreadiness as correct decisions. This is a well-recognized phenomena in psychometrics, sometimes called the base-rate problem (Meehl & Rosen, 1955; Taylor & Russell, 1939). It will <u>always</u> be the case, whenever the correlations is only modest and the group to be identified is a relatively small proportion (here 20%), that as many or <u>more</u> wrong diagnoses of unreadiness will be made as correct predictions of problems.

The problem of misdiagnosis cannot be alleviated by moving the cut-off score (e.g., requiring a higher or lower developmental age as evidence of readiness); in fact, of the three cut-off scores examined by the authors, the one used in Table 1.1 produced the <u>fewest</u> classification errors. The authors preferred a higher cut-off which would have declared 33% of the kindergarteners to be unready, because in their value system it was clearly more important to catch as many potential failures as possible even at the expense of increasing false-negative errors. Using their scheme, the number of correctly identified failures would increase to 13 (15.4% of the total class); but the number of false positives would increase to 15 (17.9%). There is no escape from this dilemma of misidentifying roughly <u>half</u> of the children nominated to delay kindergarten entry, unless the test had more nearly perfect predictive validity.

From the existing studies we can summarize that the Gesell School Readiness Tests have predictive correlations ranging from .28 to .64, and in one study a concordance (agreement) rate of 78.6%. How does this degree of predictive accuracy compare with other readiness measures? Does the Gesell evidence meet technical standards for making classification decisions? Roughly, the many studies and reviews of readiness measures lend themselves to this ranking: perceptual measures are least accurate, developmental and IQ measures are next, and more comprehensive skills-related tests like the Metropolitan have the greatest predictive power. This ranking is approximate, based on averages, because correlations with first grade "success" vary from study to study. Correlations in a given study are influenced by the heterogeneity of the sample, the reliability of the criterion (lower when teachers' ratings are used instead of achievement tests), and the time elapsed between the prediction and the criterion measure (e.g., concurrent correlations are higher than one-year predictions).

Examples of perceptual tests are the Frostig, which correlated .48 with first grade teacher ratings (Thomas & Chissom, 1974) or the visual and auditory measures in Abrahamson and Bell (1979) that correlated .35 and .47 with a vocabulary test given at the end of first grade. In the Kaufman and Kaufman study (1972), the group administered IQ test correlated slightly less well (.58) with first grade achievement than had either the Gesell or Piagetian developmental measures (both .64). In other studies, however, intelligence tests are stronger predictors of achievement measured at the end of first grade, e.g., r=.75 in Harrison (1981).

More academically or skills-oriented readiness measures tend to be more predictive probably because they are both more relevant to the final criterion

and more inclusive. It is a well known rule in statistics that several different variables, each correlated with the criterion, will jointly make a stronger prediction. Tests such as the Metropolitan have multiple subtests that in effect reflect perceptual and developmental skills, e.g., auditory memory and visual matching, as well as learned skills that are specifically prerequisite to reading, e.g., letter recognition; in addition, the cognitive-conceptual tasks tap learning ability. In several studies, the Metropolitan Readiness Test has consistently demonstrated predictive validity correlations of .70 to .78 (Nurss & McGauvran, 1976; Salvia & Ysseldyke, 1981; Telegdy, 1975; Thomas & Chissom, 1974).

Another academically oriented readiness measure is the Lee-Clark Reading Readiness Test with predictive correlations over one and two year periods of .42 to .56 (Lee & Cleark, 1962). The Lee-Clark test is of particular interest since its authors, like Ilg and Ames, intended the test to be used to identify children who were not ready to read and needed a special developmental program before first grade. Note that this test use imposes more stringent validity requirements. If a test is only used within a given classroom to identify which children need remediation of particular skills, the validity demands are not so great as when the test is used to place a child in a special program. Lee and Clark (1962) also reported an agreement rate, like the Wood et al. study of the Gesell, of 72% in detecting later unsuccessful readers.

The Lee-Clark and the Gesell, in fact, have quite similar validity evidence. Leading experts in the field of individual assessment have concluded, however, that the Lee-Clark Reading Readiness Test "lacks the validity necessary to use the test to make educational decisions for children" (Salvia & Ysseldyke, 1981, p. 463). Their reasoning is based on the same

problem examined earlier with the Gesell. Even when there is moderately good correlation between test and criteria of success (e.g., correlation between .6 and .7), the predictive accuracy is so poor that half of the children will be incorrectly placed in special programs. Similarly, the Gesell tests do not have adequate validity to identify children for special two-year kindergarten programs. This negative finding may seem perplexing since the Gesell tests are relatively better predictors than many perceptual motor tests or even group IQ tests. In fact, the only predictor that is consistently better than the Gesell is the Metropolitan Reading Readiness. Nevertheless, none of these various predictors meet minimum technical standards for making important individual placement decisions.

A second major issue in test validation is the question of construct validity. Do the Gesell tests measure developmental level as intended? The test Standards (1974) are very clear that this question cannot be answered by a single correlation coefficient. Rather, a series of studies is required to demonstrate from the pattern of empirical relations that a test measures what is claimed. Especially, test results should be highly correlated with other measures of the same construct (called the concurrent validity requirement) and have much lower correlations with tests that measure something else (called the discriminant validity requirement). By these criteria, then, the Gesell tests should show strong correlations with other developmental measures and must have low correlations with alternative constructs such as IQ.

Only the Kaufman study (1971) bears any resemblance to the requirements for construct validity evidence on the Gesell. For a sample of 103 five- to six-year-olds, Kaufman obtained a correlation of .64 between the Gesell and a

test of Piagetian developmental tasks. This is one instance, then, of moderately good convergent validity. However, in the same study the Gesell also correlated .61 with mental age measured by the Lorge-Thorndike Intelligence Tests. In a factor analysis of the same data, one general factor accounted for 70% of the common variance in the IQ and developmental tests.* On this basis, the Gesell does not have adequate discriminant validity from IQ. Furthermore, in a recent paper May and Welch (1985) reported correlations, between GSRT and IQ measured two to four years later, that were as high or higher than the predictive validity correlations with achievement.

In the most recent edition of School Readiness (Ilg et al., 1978), the authors give a one-page summary of the research supporting the Gesell tests. They cite Kaufman's (1971) study described above and the following quotation from Arthur Jensen "confirming the usefulness of the Gesell developmental tests" (p. 14):

> Readiness in the cognitive sphere is largely the ability to conceptualize the learning task, to grasp the aim of one's efforts long before achieving mastery of the task.
>
> The relative ineffectiveness of shaping one's behavior to external requirements as compared with internal requirements is perhaps seen most dramatically in the child's efforts to copy geometric figures of varying difficulty. Unless the child can internalize conceptual representations of the figure, he cannot copy it, even though the model is directly in front of him.
>
> Partly for this reason, as well as for its correlations with school readiness, the Ilg and Ames figure copying test is probably one of the most convincing and valuable measures of cognitive development in the preschool years and throughout the primary grades. (It shows very clearcut age differences, and the ten figures come close to being a true scale in the Guttman sense.) (Jensen, 1969, p. 15).

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* Kaufman (1971) also found some evidence of uniqueness for each test; however, the percent of variance attributable to each of these factors was small. The rotated solution was of limited value because a method which forced independent factors was used.

In other work, however, Jensen (1980, 1981) has provided careful analyses of the nature of the Gesell tasks. He makes it clear that this "valuable measure of cognitive development" is a measure of intelligence. Jensen calls the Figure Copying Task "developmental" because it is highly related to mental age between the ages of 3 and 12. Performance "has nothing essentially to do with motor skills or perception" (Jensen, 1981, p. 166). The child's copying performance "is guided by the accuracy of his concept of the figure" (p. 166). Specifically, Jensen says, the copying test is "an excellent measure of g," (p. 166) (g is the general factor underlying all intelligence tests).

Because Ilg et al. (1978) specifically say that the Gesell tests measure something different from IQ, it is relevant to cite the details of Dr. Jensen's research and analysis of the Figure Copying Test. Especially, it should be noted that clinicians at the Gesell Institute have not themselves conducted research to assess the discriminant validity of their measures. Although Jensen did not analyze the entire Gesell test, Ilg and Ames have frequently praised the copy forms measure as "the most reliable indicator of children's behavioral maturity" (Kaufman, 1971). The following exerpts are taken from Jensen (1980, pp. 662-665).

> Between kindergarten and fourth grade, however, figure copying scores correlate highly with other IQ measures. Our factor analyses of the FCT scores, along with a variety of other cognitive tests, show it to be as highly g loaded as its reliability and variance permit, and it is not appreciably loaded on any other factor. It clusters closely with Raven's matrices and the Lorge-Thorndike Nonverbal IQ. When factor analyzed along with 39 other highly diverse mental tests given to 60 mentally retarded young adults (mean Stanford-Binet IQ of 39), the FCT has a loading of +0.75 on the g factor (first principal component) and has no significant loading on any of the other eight components (with eigenvalues greater than 1). Stanford-Binet IQ has a g loading of .73 in this same analysis. In the range of mental ages appropriate for the difficulty levels of these figural items, the fact is a nearly pure measure of g. (p. 663)

> We have given the FCT to over 10,000 children, 5 to 12 years of age, of different ethnic groups attending the same integrated elementary schools in California. We find pronounced group differences at every age, with Orientals (Chinese and Japanese) scoring highest, followed closely by whites, then Mexican-Americans, and, last, blacks. The range of the group means is almost two standard deviations between Orientals and blacks, as can be seen in Figure 14.3....Black children in the fourth grade (ages 9-10) perform on a par with Oriental children in the first grade and slightly below white children in the second grade. The Mexican-American group, although lowest in socioeconomic status, is intermediate between Orientals and blacks and nearly on a par with whites. Considering that performance on the FCT is most highly related to learning "readiness" for the typical scholastic tasks of the primary grades (Ilg & Ames, 1964), these results are not irrelevant to the commonly observed ethnic difference in early school learning of the "three R's." (p. 663)
>
> The interesting thing is that all the different ethnic and social-class groups show the same types of difficulties in exactly the same sequence but that they simply reach the same modal difficulties at different ages, as if their analytic-conceptual development is merely progressing at different rates. The drawings of black children at ages 6 to 7 are indistinguishable from the drawings of white and Oriental children of ages 5 to 6. (p. 664)
>
> A ten-item figure copying test is one of the subscales of the Wechsler Preschool and Primary Scale of Intelligence (WPPSI). Its correlation with the Full Scale IQ is +0.58. (The average correlation of each of the other WPPSI subtests with Full Scale IQ is +0.61.) The highest correlation of figure copying scores with FS IQ (+0.64) are at ages 5 and 6. (p. 665)

On the basis of the available evidence then, the Gesell tests lack discriminant validity from IQ. There is more evidence to support the claim that the Gesell tests measure IQ than to support the claim that they measure "behavioral maturity." It is still technically possible for an individual child to be very bright (especially verbally) and appear "immature" on the Gesell (referred to as "superior-immature," Ames et al., 1979; however, these cases will be the exception rather than the rule. Since the example of the superior-immature child is often used to persuade parents that the Gesell is not an intelligence test, it should be pointed out that these instances are relatively rare. As a rule and in contradiction to Gesell philosophy, the Gesell tests will identify as "unready" children who are slow learners, who come from low socio-economic backgrounds, and who are young compared to classmates (mental age is still influenced by chronological age).

1.14 Clinical instrument

The Gesell tests are similar to other individually administered psychological tests in that trained examiners may gain important insights by observing how the child behaves in the testing situation. However, the Gesell differs from individual intelligence and achievement tests (usually administered by trained psychologists), in that relatively greater emphasis is placed on interpretation of accompanying behaviors. In the most recent scoring notes (Ilg, et al., 1982), examiners are instructed to attend to both PROCESS and PRODUCT:

> The Developmental Examination, although only a 30 minute test, reveals a wealth of information about a child's whole PROCESS...the way thinking is organized; the reaction to new and challenging situations; the child's level of control achieved in handling his/her own body in fine motor tasks; the expression of ideas and the kinds of ideas expressed; the ability to comprehend a verbal direction; the amount of concentration and energy given to a challenging job to be done; the various ways the child can think of to solve a problem for which there is no ready answer. The examination often reveals not only what children know, understand, and can do, but what they feel about themselves as they are doing it.
>
> Using both PROCESS and PRODUCT in developmental evaluation enables an examiner to easily recognize the "flavor" of an age. A developmental exam is concerned with a child's self-comfort and ability to cope with the demands of the environment, thus putting the child in a position to accomplish balance between inner growth forces and outer environmental forces. (p. 81)

Process indicators include how a child holds his tongue or grasps his pencil for the copy forms task and how the forms are organized on the piece of paper. For example, if a child's tongue is extended while copying, four-year-old behavior is suggested. At five years of age, "tongue barely protrudes;" at 5 1/2 years, "tongue sweeps;" at 6, "tongue pushes against cheek or lower lip" (Ilg et al., 1982, p. 36). Similarly pencil grasp shows level of maturity: 4, "awkward pencil grasp, move up and down the shaft;" 4 1/2, "pencil grasp near point, fingers bunched;" 5, " 2-3 (finger) grasp near tip, shaft obliquely upward, pencil extension of hand;" 5 1/2 "more controlled

pencil grasp, shaft oblique" (p. 36). Especially, if a child's posture and expression indicate that he is struggling to accomplish the tasks, a younger developmental age score may be assigned than the strict product score would indicate. In a recent workshop, the instructor was asked what should be done on the cubes task if the child can "build all these things" but is constantly out of his seat? Answer:

> "Write up 4 1/2 because of out-of-seat; but products are six. This happens with real bright ones....They are accomplishing tasks ahead of themselves. That's why your observations of process are so important." (Gesell workshop, June 28, 1984)

(This child would very likely be described as superior immature as discussed earlier.)

For some of the more concrete "process" indicators, limited normative data are given in School Readiness (Ilg et al., 1978). For example, 62% of five-year-old girls draw a triangle by starting from the left side down; 66% of girls but only 28% of boys at age five start at the bottom when drawing a circle. These "norms" have the difficulties described earlier, i.e., they are based on non-representative samples and no information exists about variability within an age. For most of the "process" observations, however, there is no evidence at all as to how valid these behaviors are as indicators of developmental maturity or how reliable is their assessment.

The inadequacies of the Gesell research base may be acknowledged indirectly when the trainers comment that, "these are descriptive norms not statistical norms" (Gesell workshop, June 28, 1984) or that, "Dr. Ilg did not want to call it a test" (June 29, 1984). However, recent Standards (1985, in press) adopted by the American Psychological Association make it clear that clinical instruments are not exempt from requirements for validity evidence:

> "When clinical instruments are used in decision making, that use is constrained by the same consideration of criterion-related evidence of validity as is any other use of tests." (Standards, 1985; p. 7-2 in draft)

No evidence has been reported to establish the reliability or validity of process indicators. No studies have been done to determine whether children's personality types might be confounded with judgments about maturity. The possibility for confusion between specific disabilities and "immaturity" has been acknowledged but no concrete guidelines exist for making these distinctions. To the extent that process inferences from the Gesell are emphasized over product scores, the "test" is entirely subjective and woefully below professional standards for validity evidence. Furthermore, the Gesell authors typically do not issue caveats advising users and parents of the test's limitations. They do not say that the assigned developmental age is just a "clinical hypothesis."

1.15 Gesell test summary

- The Gesell tests are intended to measure developmental age and are used to identify children who are unready for kindergarten or first grade.

- The evidence on the reliability of the Gesell is extremely limited; only one small study has been reported. In that study, the standard errors of measurement were such that a child who was developmentally five years old could not be reliably distinguished from 4 1/2- or 5 1/2-year-olds. Thus, the test does not have adequate reliability for the types of distinctions that are typically made in practice. The reliability of the Gesell does not meet professional standards in the assessment field.

- The norms for the Gesell are unrepresentative and outdated. For 5- to 9-year-olds, the norms came from one high socio-economic community in Connecticut. Although the test can probably identify children who are developmentally older or younger, inadequate norms mean the test cannot determine that a given child is or is not functioning like a "typical five-year-old. "The norms do not meet professional standards.

- The predictive validity evidence for the Gesell is limited. In the best study available, it was still the case that for any group of children identified as "unready," half would be misidentified.

- The Gesell has greater predictive accuracy for first grade success than tests of perceptual skills and is about equal to group-administered IQ tests for prediction purposes. The Gesell is less accurate in identifying potential first grade failures than composite skill-ability readiness measures like the Metropolitan. With the possible exception of the Metropolitan, none of the readiness measures (including the Gesell) meets minimum technical standards for tests used in important placement decisions.

- The Gesell lacks discriminant validity from IQ. The Gesell is just as highly correlated with measures of intelligence as it is with other developmental measures. As a consequence, more low socio-economic children and slow learners will be identified as "developmentally" young by the test. The validity of the Gesell is inadequate for its current use.

- The clinical aspects of the Gesell tests have never been subjected to validation research. Current professional standards require that even clinical instruments must supply such evidence when they are used in "decision making." (Placement in a special kindergarten in an example of such a decision.)

EFFECTS OF NONPROMOTION

1.16 Reviews of Research

In 1975 Jackson reviewed the available research on grade retention and concluded that, "there is no reliable body of evidence to indicate that grade retention is more beneficial than grade promotion for students with serious academic or adjustment difficulties" (p. 627) (emphasis added). As noted by several more recent reviewers, the effects of nonpromotion are receiving renewed attention because the practice of retaining children in grade is on the rise. Increased numbers of grade repetitions are attributed to the basic skills movement and competency-based education, which were themselves a response to perceived test score declines, lax curricula, and social promotion policies. Apparently, however, these get-tough policies have been adopted without cognizance of the body of work reviewed by Jackson.

Because nonpromotion is such a hot topic, we have the benefit of several recent reviews. The most comprehensive of these is a meta-analysis conducted by Holmes and Matthews (1984). From 44 original research studies, they were able to compute not only the average effect of nonpromotion on achievement and social adjustment, but also the effect of different methodological considerations on the stability of the conclusions. Meta-analysis is a quantified research integration technique that allows the difference between retained and promoted pupils to be reported in a common metric called an

effect size. For example, based on 575 group comparisons, Holmes and Matthews obtained an overall effect for nonpromotion of -.37. This means that nonpromoted children were on average one-third of a standard deviation below promoted control children.

The results from Holmes and Matthews analyses were pervasively negative. Nonpromoted children were behind controls in all academic areas (ES=-.44); to a lesser degree they were also lower on social adjustment measures (ES=-.27), on emotional and behavioral measures (ES=-.37, -.31 respectively), in self-concept (ES=-.19) and attitude toward school (ES=-.16). When only the nine studies involving first-grade retention were considered, the results were still negative (-.26). Because some research designs can logically either favor controls or favor the retained group (see Jackson, 1975), separate analyses were done using only studies with matched control groups. In better controlled studies, the overall effect was unchanged (ES=-.38). The results were also consistently negative whether the groups were compared after equal time in school (thus the control group was one grade ahead, ES=-.46). or after equal grade levels (granting the retained group an extra year of school, ES=-.28). Matthews and Holmes (1984) concluded:

> Those who continue to retain pupils at grade level do so despite cumulative research evidence showing that the potential for negative effects consistently outweighs positive outcomes. Because this cumulative research evidence consistently points to negative effects of nonpromotion, the burden of proof legitimately falls on proponents of retention plans to show there is compelling logic indicating success of their plans when so many other plans have failed. (p. 232)

Considering several recent studies as well as the work reviewed by Jackson (1975), Rose, Medway, Cantrell and Marus (1983) reached this conclusion:

> A summary of the results from approximately 25 studies on the effects of retention on school achievement indicates that, on the average, promoted pupils make gains of 8-12 months in a year while retained pupils make gains of only about 6 months. That is, it often takes two years for the retained child to learn what the promoted child learns in one year. Looking at individual progress, roughly 85% of promoted pupils as compared to 35% of retained pupils are found to be achieving at a normal rate.

> In examining the progress of retainees during the repeated grade as compared to progress in the original grade, we find, based on examinationof more than 6,000 cases, that only about 20-35% of the retainees learn more material in their second year, while as many as 40% of the retainees actually learn less material. (p. 206)

Niklason (1984) covered much of the same ground regarding the negative effects of retention but also offered several new insights. For example, some studies claiming benefits for retention do not use control groups; when such studies (Kerzner, 1982) report "significant improvement," they have only shown that retention has not halted academic progress; they have not demonstrated the benefit of retention compared to promoted controls. Also, Nicklason pointed out that the intention of holding slow children back so they will not have to struggle so hard is not empirically supported. "The research evidence...indicates that a retained child will usually be in about the same relative class standing academically in the new class as s/he was in the class with age peers." (p. 492) Finally, Nicklason conducted a new study comparing 62 retained children and 40 recommended for retention (but promoted) pupils. The promoted children showed significantly more growth in reading. On the arithmetic, personal adjustment, and social adjustment measures there were no differences.

1.17 Beliefs about retention

The increasing popularity of grade retention is at odds with the unequivocally negative results of the research. In a survey of parents, teachers, and principals, Byrnes and Yamamoto (1984b) found strong support for grade retention as a solution to low academic achievement. Their findings are similar to the 1978 Gallup Poll results where two out of three respondents favored promoting students from grade to grade only if they could pass a test. Public attitudes about the merits of retention are not entirely

irrational but may be built on false premises. For example, if test score declines occur during a period of social promotion policy, then it appears to follow that stopping social promotion will improve achievement. But this link has never been subjected to direct test (except in the retention literature). Of course, if apparent score declines are more likely attributable to reduced dropout rates and a more egalitarian population seeking college admission, then there is no connection whatever between social promotion policies and achievement.

Several authors have tried to explain why educators might still believe in the benefit of retention even though the research results are negative. Why haven't they seen its negative effect with their own eyes? The best explanation is that teachers find themselves in the midst of a bad research design. When Jackson (1975) evaluated different designs for studying the effects of nonpromotion, he demonstrated that studies without control groups were biased in favor of retention. Because subjects were only compared to their own performance the previous year, any gain was believed to be a positive effect of grade repetition. Rose et al. (1983) suggest that it is because nearly all retained children make some progress in the second year that teachers trust their own experience rather than research data. "The casual observer of these children's progress is unable to compare this growth with those gains that might have been found had the children been promoted." (p. 206) Furthermore, when retained children finally do go on to the next grade they may still have academic or behavioral problems. When teachers observe that retained children are still struggling they often conclude that the problem would have been "even worse" with the extra year, whereas controlled studies find that the problems for promoted controls are about the same. Thus many educators continue to believe that retention will improve

achievement and adjustment because in their own experience they are not able to carry out an experiment to see how a retained child "would have done" had he been promoted.

In their interviews with teachers, Byrnes and Yamamoto (1984a) found them to be consciencious and concerned about holding a child back:

> However, they all felt that it would be worse for the child if he or she were promoted. They felt that the next grade teacher would not be able to accommodate the child's level of skills or emotional development and the child would experience even more failure. They also feared being ridiculed by the teachers of the following grade for creating more work for them by sending such ill-prepared students. (pp. 15-16)

1.18 The Gesell studies

As principal spokesman for the Gesell Institute, Dr. Ames would assert that the majority of studies testing the effects of grade retention are not relevant because most studies select children to repeat who are low in academic ability rather than immature.

> Recent research findings bear out the effectiveness of repeating. In some early reports which indicated that repeating "didn't work," investigators had assumed that repeating should work for everybody, should cure all problems. Obviously it didn't. Our position is that repeating is an effective remedy when students are immature and thus overplaced, but that it should not be expected to solve all school problems. It is not a remedy when children are of very low intelligence, are dyslexic, psychotic, emotionally disturbed, or otherwise handicapped.
>
> Recent, more careful research, which included only those children whose chief problem (according to their teachers) was immaturity, appears to show convincingly that in a majority of cases, repeating is effective and does improve school performance. Such studies as those by Stringer in 1960, Chase in 1968, and Scott and Ames in 1969, all find that repeating can help a significant proportion of failing children if careful criteria for selection are respected. (Ilg et al., 1978, p. 16)

Again in 1980, Ames said that the "evidence of the benefits of retention is mounting" (p. 11) and cited again the Chase (1968) and Scott and Ames (1969) articles and an unpublished study by Lewis (no date).

In this section the four studies cited by Ames will be reviewed briefly. In the following section on kindergarten and first grade retentions more recent, controlled studies will be reviewed where children were explicitly retained on the basis of developmental unreadiness. It should be noted, however, that the mass of studies on nonpromotion should not be dismissed too quickly. The majority of studies reviewed above were focused on the effects of retention in first and second grade (Rose et al., 1983, p. 206) and educators very often identify "developmental immaturity" as a characteristic of children being retained (Byrnes & Yamamoto, 1984b).

The four studies cited by Ames are all of the type classified by Jackson (1975) as a Type II design, explained below. (Incidentally, the three published studies were included in Jackson's review.)

> The second type of design merely compares the condition of retained students after promotion with their condition prior to promotion. This design does not attempt to compare the effects of grade retention with those of promotion, but rather only to assess the effects of grade retention on students who are having difficulties in school. The design is included in this review because it is a common one, and the results from analyses using this design are often cited in arguments favoring the use of grade retention. (emphasis added)
>
> This design is biased towards indicating that pupils benefit from grade retention because of the lack of control for possible improvement resulting from causes other than the retention experience itself... Consequently, not only does this design fail to evaluate the benefits of retention relative to those of promotion, but it is not adequate even for assessing the benefits of grade retention. One who uses this design might conclude that even students who are not having difficulties in school would benefit from grade retention! (Jackson, 1975, p. 623)

Scott and Ames (1969) included 27 children in their study whose "repeating had been determined solely on the basis of immaturity" (p. 434) and whose IQs were 90 or higher. They found that "every single child received higher marks after repeating than he had the previous year" (p. 435). Parents were asked to rate their children's adjustment retrospectively. For the nine questions there was an average improvement of one scale point on the five-point scale

from "little difficulty" to "fairly well." Teachers did not rate the children comparatively but for 10 questions pertaining to adjustment after repeating, "90 percent or more of the pupils were rated as average, high, or very high" (p. 438).

Chase (1968) selected a subgroup of 65 repeaters from grades 1-3 who were identifed by their teachers as normal but immature. Pupils were not included if the reason for retention had been primarily low IQ, emotional disturbance, perceptual dysfunction, specific academic problems, or inadequate attendance. No control group was used; furthermore, achievement was never measured either by standardized test or by teacher grades. Instead "developmental and visual-motor tests were given in the belief that the abilities which they sample are essentially unaffected by normal schooling" (p. 174). Because Chase did not test any nonrepeaters in the school district, she had to rely on normative expectations to judge the relative standing of the retained group. In five out of six comparisons using the Bender visual-motor test and the Gesell, the retained children were not only behind their age expectation but were behind the norm for their current grade. Chase attributed the results in part to the New Haven standardization of the Gesell which was "somewhat rigorous for the present population" (p. 175). Nevertheless, she concluded that during the repeat year perceptual and motor abilities developed to a point that is closer to grade-level expectancies (p. 177). Her findings are consistent, however, with the negative research conclusions, i.e., that retained children are still in the bottom half of their class after retention. Since these children were specifically selected for "immaturity" and not low ability, their continued below-average performance after an extra year is especially striking.

In the Chase study, teacher and parent attitudes toward retention were generally favorable. Teachers judged that retention had met the needs of 78

percent of the children. Only 6.2% (four children) were said to have suffered serious emotional upset; for 16% the emotional upset was only temporary; the remaining 78% had not experienced any problem. The majority of parents (54% to 74%) rated their child's attitude toward school as improved from the previous year. On questions about happiness and getting along with friends the majority rated their child the same as last year.

As summarized by Ilg et al. (1978), Lewis (no date) surveyed the parents of 406 retained children. On six questions reported, the parent responses were very favorable ranging from 58% agreeing "my child has done better emotionally" to 82% agreeing "I would make the same decision again." (How the responses were distributed on the negative end of the scale was not reported.)

The Stringer (1960) study did not involve immature children specifically, but had the potential of being a better research design than the other studies cited by Ames. Stringer had achievement test data and attempted to locate a social promotion group. Unfortunately, results were only reported as an "average percent of normal growth" presumably defined in grade equivalent units. The first year the socially promoted group showed greater progress than the retained group. The next year, however, the socially promoted group was either making about the same relative gains as repeaters (p. 373) or less relative gain (p. 374); however, the second year comparisons were inexplicably based on 18 cases instead of 41.

Thus, the evidence which is believed to demonstrate the benefits of retention is primarily parent and teacher opinion without relevant comparison groups. When perceptual and developmental tests were given (in the Chase study) after retention, children were still below their new grade level, raising the question as to whether "immaturity" had indeed been the original problem. The Stringer study was the only one with achievement data and

socially promoted children made greater gains than retained children consistent with the negative findings in the larger nonpromotion literature.

1.19 Effects of Nonpromotion Summary

- Major reviews of the grade retention literature have consistently found that nonpromotion has negative effects. Retained children are behind comparable children who were not retained in all areas of academic achievement, on measures of social-behavioral adjustment, in self-concept, and in attitude toward school.

- The pervasively negative research results are at odds with the beliefs of laymen and educators about the benefits of grade repetition. Several authors have tried to explain this discrepancy. The best explanation is that retention appears effective because the majority of retained children make some progress the second year. Even though comparative studies show that the retained child would have made just as much or more progress without retention, teacher beliefs are based on perceived gains and do not have the benefit of this latter comparison.

- The four studies cited by the Gesell Institute as showing the benefits of retention all lack control groups. This type of research design was criticized by the major reviewers as biased in favor of retention. More recent and more adequately controlled studies are discussed in the next section.

EFFECTS OF NONPROMOTION IN KINDERGARTEN AND FIRST GRADE

1.20 Academic outcomes

If the youngest children in a first grade classroom tend to have slightly lower achievement (section 1.1), would an extra year of kindergarten or pre-first placement improve their chances for success? In keeping with the Gesell philosophy discussed above (section 1.18), are children identified as "immature" a special group who will benefit from an extra year? Might early retention be effective even though nonpromotion has had negative effects in other elementary grades?

Gredler (1984) reviewed the research available in "transition classes." These classes, sometimes called pre-firsts, are specifically intended for

children who are considered "unready" for the regular first grade. Several recent studies reviewed by Gredler are summarized here briefly. For example, Bell (1972) found that "at risk" children who were nonetheless placed in first grade did better on achievement tests after one and two years than the children who spent an extra year in the readiness room. The teachers in Bell's study expressed great faith that the transition room program would enhance self-concept because the children could learn at their own pace and would eventually do so much better in first grade. When self-concept measures were administered, however, Bell found that the transition room children had lower self-esteem and lower self-confidence than the at-risk children who were promoted.

At the end of first grade, Talmade (1981) compared the reading achievement of children who had had an extra transition year with a statistically equated control group and found no differences. Raygor (1972) was the only one of the half-dozen studies reviewed by Gredler that found a benefit for an extra year placement. At the end of first grade, "potential first-grade failures" (the promoted group) scored significantly lower than the transition room and kindergarten repeaters on the Stanford Achievement Test. However, as Gredler noted the differences tended to wash out when the groups were compared again at the end of third and fourth grade. Furthermore, the "potential failure" group was not significantly different from regular fourth-grade classmates.

Matthews (1977) conducted an extensive study with several different comparison groups. "Potential first-grade failures" whose parents had not agreed to retention outperformed children who had been retained in first grade. Children who had been placed in a transition program were no different from at-risk children measured both at the end of second and third grades. Similarly, Leinhardt (1980) found that after an extra year of schooling (spent

on "learning-to-learn skills"), transition room children were no different from poor-prognosis children who had been placed in the first-grade setting.

From these studies, Gredler (1984) concluded:

> Analysis of the research studies of transition rooms raises questions about the degree of educational "payoff" obtained with such programs. Research indicates that transition room children either do not perform as well or at most are equal in achievement levels to transition room-eligible children placed in regular classrooms. (p. 469)

Gredler also reviewed studies indicating that transition rooms are more often populated by boys and children from low socio-economic backgrounds and that teachers may offer "watered-down" curricula because of lowered expectations. As has been demonstrated in the special education literature, these variables could account for the depressed achievement of children in separate classes compared to their mainstreamed counterparts. Gredler concluded that alternatives such as extended-day kindergartens and individualized reading programs had greater evidence of success than transition-room programs.

May and Welch (1984) conducted a study in a school district where children were placed on the basis of the Gesell Screening Test. Children who were identified as developmentally immature were recommended to "buy a year" and spent an extra year before second grade. If their parents refused the recommendation, immature children were classified as "overplaced" and continued in the traditional grade sequence. On the state achievement test at the end of third grade there were no differences between the overplaced and buy-a-year group. On the Stanford Achievement Tests given at the end of second, fourth, and sixth grades, there were likewise no differences between the two groups, one of which had had an extra year of school. More importantly, on the Stanford there were also no differences between the at-risk groups and the rest of the school district population. Thus, May and Welch concluded that the overplaced children were not suffering the learning

difficulties predicted by Gesell theory and there was no academic benefit from the buy-a-year placement.

Balow (no date) also reported a study where children were specifically recommended to repeat kindergarten because they were immature. When kindergarten repeaters and those recommended but not retained were given a readiness test at the beginning of their respective first-grade years, the retained group scored significantly higher. However, at the end of second, third, and fourth grades the children whose parents had refused to repeat them were significantly ahead in reading achievement.

Only one study was found that gives some support to the short-term benefits of retention. The North Carolina Department of Public Instruction (1983) conducted a large-scale study of children retained in first grade. When matched controls were compared at the end of their respective first grades, the children with the extra year of schooling were appreciably higher in reading*; by the end of second grade the difference had been cut in half, and by third grade was essentially zero. The North Carolina design also permitted comparisons between groups matched for years of schooling (but with the promoted group one grade ahead). As might be expected, these comparisons always favored the promoted group. Throughout this review we have tended to downplay such comparisons because the whole rationale behind retention practices seems to be to ignore the costs of the extra year; i.e., the important consideration seems to be how well children do when they finally get to a given grade. If instead we considered how much was learned in a given school year, the promoted children always do better.

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* Because the standard deviation of the scale scores was not given, it was not possible to judge the magnitude of the difference.

1.21 Affective outcomes

Many educators believe that retention in kindergarten or first grade is preferable to later retention because less social stigma will occur for younger children. Rose et al. (1983) identified three "fairly well designed studies" (Chansky, 1964; Finlayson, 1977; Goodlad, 1954) in which there were "no differences in adjustment between first-grade repeaters and potential repeaters controlling for initial adjustment levels" (p. 206). Although these data do not show any harm from retention, they also do not show any benefit.

Byrnes and Yamamoto (1984 a) conducted intensive interviews with 52 first graders and a small number of third and sixth graders who were repeating. They found that many children, especially first-grade girls, would not reveal that they were repeating. When asked how they might feel about being retained, 84% of the childen gave answers such as "sad," "bad," and "upset." Byrnes and Yamamoto concluded that children view nonpromotion as a punishment and believed it happened to them because they could not succeed in school. They held these impressions even though the teachers often gave euphemistic explanations to the children for why they were being retained. Citing a study by Yamamoto (1980), Niklason (1984) noted that when parent and teacher believe that retention does not damage self-concept they might not accurately reflect the feelings of children themselves. In Yamamoto's study (1980), elementary students completed a Child Stress Scale and rated being retained as highly stressful--just below losing a parent and going blind.

1.22 Summary, effects of retention in kindergarten and first grade

- Fewer than a dozen controlled studies exist on the effects of retention in kindergarten and first grade. In these research studies, children were identified for nonpromotion because of "immaturity" and "unreadiness" rather than school failure. In all but two studies, children who were identified as potential failures but whose parents refused retention achieved the same or better than children who repeated.

- In only two studies, an initial benefit was found in reading for retained children but in both cases the advantage disappeared by the end of third grade. Also, in studies where the data were available, children who were initially identified as "at risk" became indistinguishable from their normal school peers by the third or fourth grade.

- In three comparison studies, first-grade repeaters and potential repeaters were the same on social adjustment measures. In interviews with first grade children, however, the great majority were sad and upset about being retained.

- The existing research does not show either academic or social-emotional benefit from retaining immature children.

Chapter Two

FIRST GRADE OUTCOME STUDY

Despite the apparently consistent negative findings of existing research on nonpromotion (Chapter 1), more evidence is needed specifically regarding the effects of kindergarten retention. First, advocates of kindergarten retention would argue that its purpose is to prevent school failure before it happens; therefore, they would not wish to generalize from first or second grade retentions where children had been identified apparently after some academic failure. Compared to the 50 or more studies on nonpromotion in other elementary grades, there are only a half-dozen studies involving repetition of kindergarten or transitional (pre-first) programs. The kindergarten studies, like other research on grade retention, suffer from methodological problems since children cannot be randomly assigned to promoted or retained groups. Although retained and control pupils in these studies were all recommended for retention, depending on the reasons for not following the recommendation to repeat the grade, it is possible that the promoted groups were systematically more able students. For example, May and Welch (1984) reported that their control group, children who were identified as developmentally immature but whose parents would not agree to retention, was slightly ahead of the retained group initially.* Even if there was not measurable bias between groups for most studies, the discrepancy between the negative empirical results and the

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* It should be noted that these non-random differences need not always favor the control group. In the present study, data were available in one school on a substantial number of children recommended for retention but whose parents refused. The children whose parents agreed to have them repeat were on average much better off on entering readiness measures than the children whose parents refused, possibly related to SES differences or attitudes about the meaning of retention.

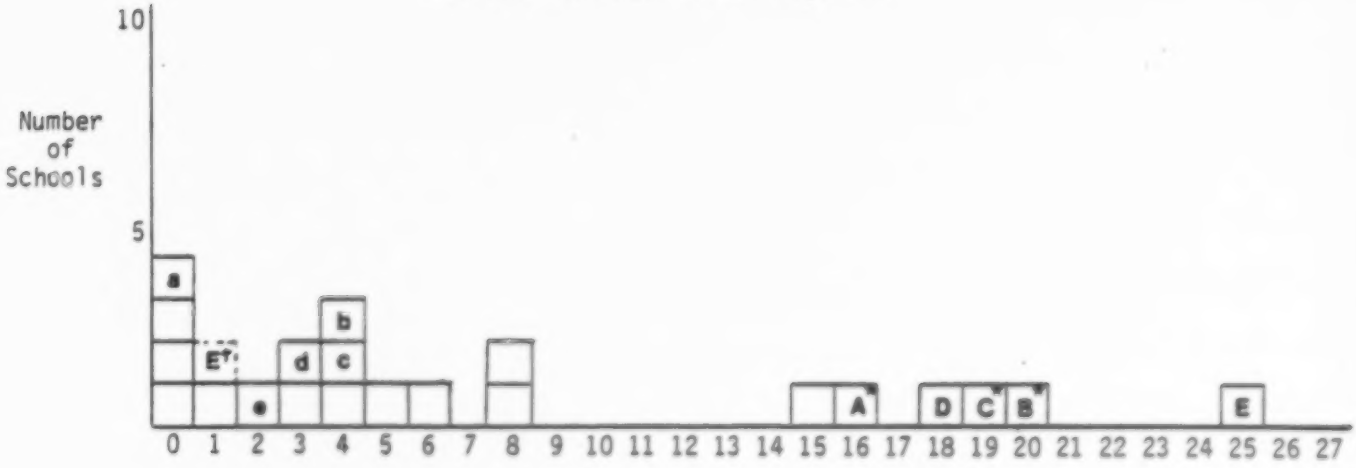
beliefs about positive program benefits (see Gredler, 1984), leaves advocates concerned that somehow retention benefits have been missed.

Kindergarten retention practices in the Boulder Valley Schools offered a unique opportunity for a research design with a more equivalent control group than is typically found in other studies. Elementary schools within the district differed markedly in the percentage of children spending two years before first grade, from 0% in several schools to 25% repeating kindergarten (with as many as 38% recommended for retention). Furthermore, the "high-retaining schools" were not of one particular type or location, i.e., they were spread throughout the district and served both higher and lower socio-economic neighborhoods. Because the schools were so different in retention rates, the present study did not have to rely on the questionable practice of selecting control (promoted) subjects from the same school as the retained children. Instead, more comparable subjects could be selected who were equally low from matched schools and who would clearly have been candidates for retention had they attended a high-retaining school. Of course, it is understood that very young or "at risk" children may be exposed to quite different "treatments" or instructional programs in the low-retaining schools.

The purpose of the study, then, was to address the question of how children retained in kindergarten would have done in first grade if they had not been retained. Are the children more successful academically after an extra year to grow? Do they feel better about themselves because they were not pushed ahead before they were ready? Or, when compared to similar children who were not retained, are there negative or negligible effects consistent with the few existing studies?

Sample

A two-stage sampling procedures was used to identify first schools and then matched pairs of subjects. Data on retention rates by school were collected for the first time at the end of the 1982-83 school year. The distribution of "percent retained in kindergarten" for all elementary schools is shown in Figure 2.1. Schools labeled A-E were identified for study as the high-retaining schools. Then, control schools were selected so as to be matched as closely as possible on size, percent receiving reduced or free lunch, and mean CTBS scores. Before discussing the characteristics of comparison schools, however, it is important to note the loss of one school from the original design. School E was the highest retaining school, but as



* Schools A, B, and C also had unusually high numbers of "lost" or unaccounted for kindergarteners compared to all other schools in the district.

† School E was a low-retaining school through 1981-82.

Figure 2.1 Distribution of elementary schools by percent retained in kindergarten for 1982-83

confirmed by the principal, 1982-83 was the first year that such retention occurred. The first graders who were the object of this part of the study would have had to have been retained (been in kindergarten for the first time) in 1981-82. In that year essentially no children repeated kindergarten in School E (when we studied the first grade files we found only two children who transferred in after their parents elected to have them repeat). Therefore, for this part of the study, School E served as an additional control school. To a lesser extent, the same problem occurred with School D. School D retained fewer children in 1981-82 than were reported in 1982-83 (or at least fewer kindergarten repeaters were still present in the first grade class). As a result, only a few cases from School D are included in the total sample comparison of retained children versus matched controls.

The characteristics of the high-retaining and low-retaining schools are summarized in Table 2.1. School size (K-6 enrollment) was considered in selecting control schools but was deemed the least important of the three matching variables. Thus, matched Schools A and a differ somewhat in size. The percent of children receiving free and reduced-priced lunches (FRL) was used as a crude index of the school's socio-economic status (SES). However, other knowledge of SES factors was also considered. For example, Schools D and d both have significant English as Second Language (ESL) populations. Schools B and b serve adjacent attendance areas and are believed to be more similar in SES than the FRL measure would suggest. Finally, third grade mean CTBS scores were used to identify schools whose populations have similar achievement-ability levels. As explained above, School E and its intended comparison school served as additional control schools. For example, at the pupil level, if an accurate match could not be found from control School a for

a retained child at School A, the control child might be selected from school E. Especially, because of missing entry-level data at School C, School E served as an alternate control for School C to which it is a close neighbor.

At the second stage of sampling, entry-level data and school histories were coded for all first graders at both the high-retaining and low-retaining schools. Then, at the high-retaining schools all first graders who spent two years prior to first grade were identified. These children, called the retained group, were automatically in the study if they had complete entry-level information. The lack of entering Santa Clara scores, discussed below, resulted in some attrition from the sample. The final sample of 40 retainees was comprised as follows: 12 of 17 children retained at School A, 16 of 17 children retained at School B, nine of nine children retained at School C, and three of four children retained at School D. Follow-up analyses are provided later in the chapter to determine if the six children with missing data are systematically more or less able (on outcome measure) than the children studied. It should also be noted that the only children eligible for inclusion in the retained sample were those who had not only repeated kindergarten in 1982-83 at Schools A-D but who also were still attending the same school at the end of first grade. Some children were surely lost to the study either because of normal migration out of district and between schools or because parents specifically changed schools as a result of the retention decision or to avoid retention. For example, we found several children in the control schools who had been recommended for retention at School A or C but whose parents wanted them to repeat with different classmates.

Table 2.1

CHARACTERISTICS OF HIGH-RETAINING
AND MATCHED-CONTROL, LOW-RETAINING SCHOOLS

HIGH-RETAINING SCHOOLS		LOW-RETAINING SCHOOLS (Matched Controls)		LOW-RETAINING SCHOOLS (Back-up Controls)	
School A	n = 559 FRL = 13% CTBS = 5.0/4.9	School a	n = 225 FRL = 14% CTBS = 5.1/5.0	School e	n = 477 FRL = 3% CTBS = 5.0/4.8
School B	n = 590 FRL = 7% CTBS = 5.0/4.7	School b	n = 607 FRL = 24%* CTBS = 4.2/4.2		
School C	n = 593 FRL = 3% CTBS = 4.4/4.4	School c	n = 483 FRL = 16% CTBS = 4.5/4.5	School E	n = 302 FRL = 8% CTBS = 4.9/4.9
School D	n = 520 FRL = 37% ESL pop. CTBS = 4.2/4.1	School d	n = 415 FRL = 38% ESL pop. CTBS = 4.0/3.6		

Note: Data reported are respectively: K-6 enrollment, % receiving free or reduced lunch (FRL), and third grade CTBS school means in grade equivalent units for total battery and / for "expected" G.E. based on short form aptitude tests.

*Schools B and b served adjacent attendance areas and are believed by district personnel to serve very similar SES groups despite the difference in %FRL.

A matched-control child was then selected from the corresponding low-retaining school (or back-up control school) for each retained child. Retained and control children were matched on sex, birthday, SES factors, and entry Santa Clara scores. In creating the matched pairs, there was never any deviation from the requirement that the children be the same sex. We judged it better, for example, sometimes to have birthdates or scores deviate by two or three months than to pair a boy with a girl. Birthdays were used, lagged by a year, so that the retained and control children were the same age when

they entered kindergarten for the first time. Of the 40 matched cases, 32 had what we considered to be good matches for age at entrance, i.e., birthdays were within two months of each other (in fact, 23 were within one month). Four matched pairs differed by three or four months in entrance age; these and the remaining four cases were flagged as either "favoring control" or "favoring the retained" group. Later, when we did special analyses of only identical matches or those favoring one group or the other, we were able to examine the effect of any inaccuracies in the match of initial characteristics on the final results. (As it turned out, the findings were consistent regardless of the precision of the initial matches.)

Two retained children for whom English is a second language were matched with comparable low SES (reduced-price lunch), second language control children. Incidentally, these two pairs account for two of the more discrepant birthdates since it was more important to match on language and initial readiness scores. The final matching variable was Santa Clara developmental score. Again, retained and control children were matched on scores obtained at the start of their first year in kindergarten. Thus, these two groups of children were comparable when they first started school.

The Santa Clara Inventory is an individually administered measure of developmental tasks. It is administered to kindergarteners district-wide in September. Some schools also reassess kindergarteners mid-year or at the end of the year. The Santa Clara has eight subtests like those typically found on school readiness measures: conceptual development, language development, auditory memory, auditory perception, visual memory, visual perception, visual motor performance, and motor coordination.

Because the Santa Clara does not have adequate normative data for combining separate item responses, a scoring scheme had to be devised for the purposes of this study. On each item, teachers indicate whether the child can do the task "almost never," "some of the time," or "most of the time;" these responses were coded 0, 1, and 2, respectively. Separate subtest scores were computed for each child as the sum of the item scores. Then, based on the September kindergarten data for all 700 first graders in the 10 sampled schools, means and standard deviations were calculated for each subtest. These statistics could then be used to determine each child's standard score ($z = \frac{X - \bar{X}}{s}$) on each subtest. Finally, each child received a total Santa Clara score that was the average of his or her separate z scores. These total or composite scores were used to match children who started school with the same level of academic readiness. Of the 40 matched cases, 23 were ideally matched on initial Santa Clara scores with z-score differences of less than .2; an additional six pairs had z differences between .2 and .3. The remaining 11 matched pairs were noted to favor one group or the other on z scores and were excluded from later analyses designed to test the effect of initial matching on outcomes.

To summarize, the two-stage sampling procedure produced 40 matched pairs. First graders from high-retaining schools who had repeated kindergarten (and hence were completing three years of school) were matched on sex, birthday, initial readiness, and second language with first graders from low-retaining schools who had not been retained. Whenever the initial data were suspect or the data were certain but the match was imperfect, the pairs were flagged so that the effect of these biases could be checked in subsequent analyses.

Outcome Measures

Retained and non-retained children were compared on 12 outcome measures--10 teacher ratings, and two standardized test scores as described below.

Each first grade teacher in the 10 participating schools rated all of the children in their class during the last two weeks of school in Spring 1984.* The directions to teachers and two-page rating form are included as Appendix A. The teachers first wrote in a class roster and then rated each child in the following areas: reading achievement, math achievement, social maturity, learning self-concept, and appropriateness of attention to school work. For each of these five areas, however, the teacher made two judgments about each child; one was an absolute rating in comparison to grade level standards; the other was a normative comparison in relation to other children in this first grade class. Hence, each child had ten rating scores. Grade level ratings were on a four-point scale as follows: 1 = recommended to repeat first grade because of low performance, 2 = below grade level, 3 = grade level, 4 = above grade level. Normative comparisons were on a five-point scale: 1 = bottom group (the lowest five children in this class), 2 = next-to-bottom group (next-to-lowest five children), 3 = average children in this class, 4 = next-to-top group (next-to-top five children), and 5 = top group (the five top children in this class). Teachers were also asked to report how much time was spent in completing the rating forms, which ranged from 30 minutes to five hours.

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* The teachers in the low-retaining schools could not have been aware of which children had been selected as control cases. To the extent that the first-grade teachers in the high-retaining schools were aware that the ratings were part of the "kindergarten study," they might have surmised that the ratings of children who had been repeaters would be of special interest.

The two standardized test scores were the reading and math total scores from the Comprehensive Tests of Basic Skills (CTBS) (Level B, Form S). The CTBS is routinely administered district-wide to all first grade children in April each year.

RESULTS AND DISCUSSION

The purpose of the first grade outcome study was to determine the effects of a two-year kindergarten program on success in first grade, measured both in terms of academic achievement and on affective dimensions such as self-concept and social maturity.

Outcomes

The overall results for 80 subjects, 40 retained children and 40 matched controls, are reported in Table 2.2. Before attempting to interpret the meaning of these results, a word is in order regarding "statistical significance."

Researchers use statistical significance tests to judge whether an observed difference between two groups could be attributable to random sampling error. Also, significance tests are sometimes used erroneously to quantify how big the difference is between two means. Statisticians know, however, that very small differences can be "significant" with sufficient sample size; practitioners have wisely translated this knowledge into the adage, "statistical significance is not necessarily practical significance."

In this study, significance tests to check for random sampling error are inappropriate because subjects were not randomly assigned to groups. In this

study, we instead address the related question regarding the effects of initial matching on the stability and magnitude of effects. The concern about "how big" the differences are will be addressed using the more appropriate metric of "effect sizes." Effect sizes are defined as the difference between the experimental and control group (retained minus control) in standard deviation units (i.e., divided by the pooled standard deviation). For the CTBS scores we had the benefit of national percentiles and grade equivalent scores for interpreting the magnitude of effects. We also obtained overall distributions for both teacher ratings and CTBS scores in the ten schools to serve as a "backdrop" for comparing the retained and control distributions.

Overall, the picture in Table 2.2 is one of very small or no differences. The only real difference* (measured in effect size) occurred in CTBS reading where the retained children were five points ahead of the control group. This difference translates into seven percentile points on the national normative scale. In grade equivalent units this difference amounted to a one month gain. That is, children who repeated kindergarten were one month ahead of where they would have been (the previous year) if they had been promoted to first grade instead of spending two years in kindergarten. The benefit of retained over control children on CTBS reading is highlighted by the frequency distribution in Figure 2.2. The five-point gain at the mean appears to be fairly stable across the distribution (i.e., the retained distribution is shifted one score interval to the right). For example, children who would

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* Other effect sizes were either zero, or were considered to be zero if removal of one extreme case would eliminate the effect.

have been at the 25th percentile nationally are improved to the 33rd percentile as a result of the extra year. An average improvement of one month may seem trivial to some, important to others; in any case, it is correct to say that the effect is real but that these children spent a year to gain one month in reading achievement.

Table 2.2

FIRST GRADE OUTCOME MEASURES FOR PREVIOUSLY RETAINED[a] CHILDREN AND MATCHED CONTROLS

(Total Sample, n = 40 pairs)

	Retained[a] (in kindergarten)			Matched Controls		
	X	s	n	X	s	n
Teacher Ratings						
Normative, compared to classmates, 1 = lowest group, 5 = highest group						
Reading	2.65	1.31	40	2.50	1.32	40
Math	2.80	1.29	40	2.68	1.33	40
Social Maturity	2.83	1.15	40	2.65	1.29	40
Learner Self-Concept	2.90	1.30	40	2.55	1.20	40
Attention	2.73	1.20	40	2.63	1.35	40
Standardized Tests						
CTBS Reading	69.85 (63%ile) (GE = 1.9)	9.78	40	64.55 (56%ile) (GE = 1.8)	12.96	40
CTBS Math	44.65 (78%ile) (GE = 2.2)	8.94	40	45.93 (81%ile) (GE = 2.3)	7.50	40

[a]The retained group included children who spent two years before first grade either because they repeated kindergarten, or entered a two-level kindergarten program, or were placed in pre-first.

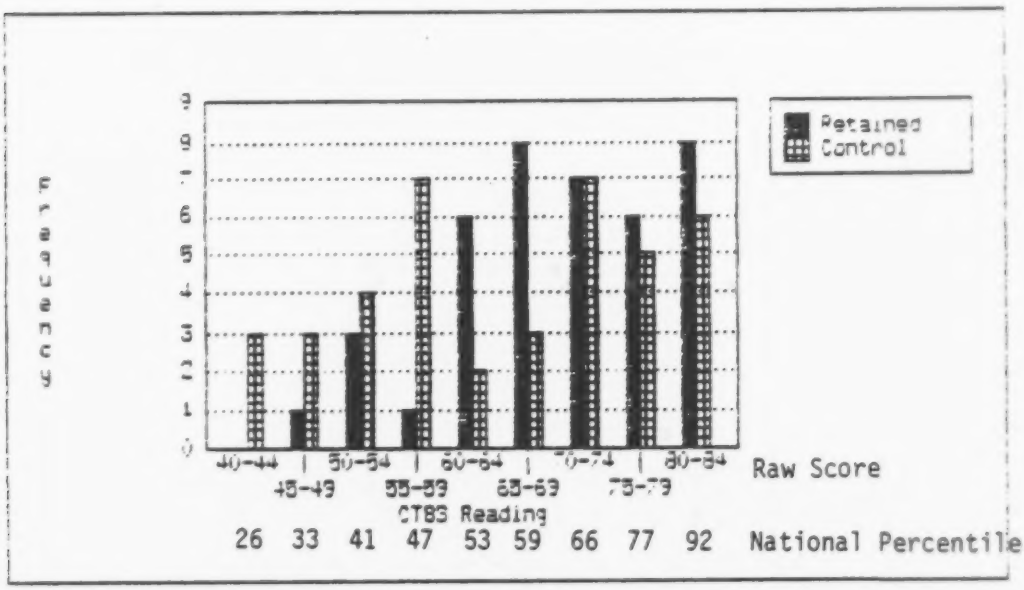


Figure 2.2: Distribution of retained vs. control scores on CTBS Reading

On the CTBS math test the effect was reversed. The control group was ahead of the retained group by three percentile points, or by one month in grade equivalent units (however, the effect size was quite small). It is worth noting that in an absolute sense both the retained children and their matched controls performed well in comparison to national norms. In reading the retained group is at the 63rd percentile; the control group, who were young and low in academic readiness compared to other children in the district, is at the 56th percentile nationally. In math the retained and control children are at the 78th and 81st percentiles, respectively. The very lowest child in either group on either test was at the 22nd percentile nationally in reading. This high standing compared to national norms even for

children who were "candidates for retention" is a familiar phenomenon in high socio-economic, high achieving school districts.

With the exception of CTBS reading, the other variables in Table 2.2 show essentially no difference between groups. Thus, the extra year before first grade did not raise academic performance in comparison to classmates. As rated by first grade teachers, there was no harm to self-concept for the retained group; and interestingly, the retained group was not better off after an additional year in terms of social maturity or attention to school work.

In addition to the normative ratings by teachers, there was also judgment data available on how the children functioned in relation to the teacher's grade level expectations. Because these ratings on the five dimensions were largely redundant (i.e., highly correlated) with the rating data in Table 2.2, both sets of ratings were not reported. However, there is one unique perspective that can be gained from the absolute grade-level ratings that is not evident from the ratings in relation to classmates.

From the normative ratings it was clear that about the same number of control and retained children were in the bottom half of their first grade class (resulting in no mean difference). Roughly the same pattern occurred when teachers were asked to identify children who were "below grade level standards." For example, 12 retained children and 13 control children were identified as below grade level in reading. However, the absolute rating scale further asked teachers to make a distinction between those who were "below grade level" and those who were "below grade level and were being recommended to repeat first grade on the basis of this factor." On the basis of reading performance (where the group differences were the greatest), seven control children were considered for first-grade retention whereas zero previously retained children were suggested to repeat again. (On the other dimensions the number of control children suggested for first grade retention

was much less, i.e., one to three children.) In one respect, then, the two-year kindergarten program can be said to have benefited seven children out of the 40 retained children since this number would very likely have been recommended to repeat first grade if they had not already been retained. It should be noted, however, that there is a confounding of treatment and judgments in this case. Essentially the same numbers of retained and control children were judged to be below grade level in reading, and in fact when we go back to the raw normative data, the same numbers were judged to be in the "bottom five" in their respective classes (10 vs. 12). Therefore, it is unlikely that the difference in retention recommendations could be due entirely to performance differences; rather it is probable that teachers considered the undesirability of a second "retention decision" in making their judgments about the previously retained group.

Data Checks

The stability of the foregoing effects was tested across schools and across comparison groups that differed in the exactness of the original matching data. The most reliable effects were for the CTBS data; i.e., the small negative effect (favoring controls) in math and the slightly larger positive effect (favoring retained children) in reading held up over all the crossbreaks of the data. By selecting the most favorable comparison the benefit on CTBS reading for retention could be boosted to two months (based on nine cases), whereas in the worst case the effect was reduced to zero (based on 12 cases). Nevertheless, the total data give a good picture of the pattern of effects across schools.

As one might expect when the average is roughly zero, the effects for the teacher rating variables tended to be sometimes positive and sometimes

negative. One school had all negative effects (i.e., the control children were higher on all five dimensions), another school had all positive effects, and a third school had zero effects except for the retained children being seriously behind on social maturity and attention even after an extra year. These positive and negative effects averaged out to the near zero effects reported in Table 2.2. When only the exact matches (n = 14 pairs) were used, virtually identical effect sizes were obtained as those found for the total sample (n = 40 pairs). Thus, the no difference result on the teacher ratings fluctuates a little, but is corroborated when the quality of the original matching is taken into account.

A check was made on the possible response bias created by the omission of six cases (four from School A) because of missing entry level data. The six children missing from the retained sample had mean CTBS scores of 72.5 and 45.7 in reading and math, respectively. These values are slightly above the total retained group means (see Table 2.2) but are the same as School A means (71.83 and 45.33) where most of the missing data occurred. Since these children would have been matched with correspondingly more able children as was done for School A, there is no reason to believe that the six missing cases created any systematic bias in the results.

Summary

The purpose of the first grade study was to determine the effects of kindergarten retention on achievement and affective outcomes at the end of first grade. To answer the question "How would retained children have done without an extra year before first grade?", retained children were compared with matched controls. Children were matched on sex, age at entrance, readiness scores, and second language. The findings were as follows:

- On all but one outcome measure there were no differences between the retained and the control group. Children who were completing three years of school were the same as their matched controls on CTBS math scores and on teacher ratings of rating, math, social maturity, learning self-concept, and attention.

- The only difference between groups occurred on the CTBS reading test where the children with an extra year were ahead of controls by five points. This gain of five points translates into a difference of seven percentile points in relation to national norms or one month in grade equivalent units. Thus, the retained children are one month ahead of where they would have been without the two-year program.

- Although the retained children and their matched controls are below average in the Boulder Valley Schools (though not necessarily the very lowest children), they were above average compared to national norms. In reading the two groups were at the 63rd and 56th percentiles. And in math they were at the 78th and 81st percentiles, respectively.

- The pattern of no differences except for CTBS reading was reasonably stable across schools and in the subset of data for which the original matches had been identical.

The dominant finding here of no differences is consistent with the few existing studies on the effects of two-year kindergarten programs. In all but one study there was no benefit in achievement or socio-emotional factors from the extra year (Gredler, 1984). In one study, there was a positive effect in reading (Raygor, 1972) on the immediate posttest that was not sustained after three or four years. Of course, the possibility remains for the first graders in this study that effects may be revealed later, i.e., at the end of second or third grade. This would certainly be the prediction of Gesell theory that argues that unreadiness follows a child even into his teens. Yet the record in the social sciences of finding delayed effects of intervention in the absence of immediate effects is particularly bleak. The incubation of effect is not a good prediction for these children.

CHAPTER THREE

REPORT OF PARENT SURVEY

Any decision that results in a child spending two years in school prior to first grade involves the child's parents. The parents are informed about the child's status and progress and are consulted about their own wishes. In most schools, parents' preferences are weighted more heavily in the final decision than are the recommendations of school personnel. Furthermore, the parents play an important role in preparing their children for the program they will receive and in assisting the child to adjust to the decision. Parents are in an advantageous position to assess their children's reactions as well as their progress through the program and beyond. Because the parents may know their children's needs better than do professionals, an important part of this evaluation was a survey of parents whose children may have been affected by the district's policies on first grade preparation. In this chapter the methods and results of the parent survey are reported. It was designed to answer the following questions:

What was the child's age and readiness for school (as perceived by the parents) when the child first entered kindergarten?

What was the initial encounter between the family and the school like? What screening did the child receive, what orientation was given, what advice did school personnel provide about the child's readiness for school?

How did the child progress through kindergarten? For children who were retained or who were recommended to be retained, when was the possibility raised that the child might spend two years in school before first grade? What testing, discussions, or conferences preceded a decision to provide a two-year program? What were the reasons given by the school personnel for such a program? What were the parents' feelings about the decision?

What were the parents' perceptions of the child's progress and achievements at the end of first grade? What do they think are the benefits and drawbacks of their children's program?

METHODS OF THE STUDY

Sampling. The initial sample of parents was selected from the first grade comparison study (Chapter 2). The two-stage sampling design is described in greater detail in Chapter 2. For purposes of the parent survey, however, the rules for inclusion differed somewhat and will be described here. For example, the first grade outcome study included only retained children (from high retaining schools) and their matched controls (from low retaining schools), whereas for the parent interviews it seemed

worthwhile to talk also to parents who had declined to have their children repeat kindergarten. The subgroups represented in the analysis are described below.

The RETAINED GROUP sample included the 40 children described in Chapter 2 who attended high-retaining schools and had themselves repeated kindergarten. In addition, two cases were added from control schools who had repeated kindergarten as the result of a decision made at a high retaining school. Attrition from the sample was caused by two non-English speaking families unable to communicate with the interviewer, one refusal, and nine parents who were never reached by phone. Thirty interviews were conducted.

The NONRETAINED GROUP was selected case by case to match the RETAINED GROUP on entry characteristics; i.e., age, sex, readiness score, and second language. For purposes of statistical analysis in Chapter 2, the accuracy of the original matching was maintained throughout, so that if a matched pair was lost because of missing data, an alternate control match was found. In the parent survey, however, once having established equivalent groups, we did not delete pairs or replace cases when one interview was missing from the RETAINED GROUP. The merits of having additional data overcame the possible slight loss of comparability. Of the original sample of 41 nonretained cases, two families were non-English speaking, one parent refused to be interviewed, two cases were reclassfied (added to the RECOMMENDED/NOT

RETAINED GROUP), and eight were never reached. Twenty-eight parents were interviewed in this group.

The RECOMMENDED/NOT RETAINED GROUP was selected predominately (9 out of 10) from School C which had by far the highest incidence of such children. Of the original sample, two children were never reached. Two children from contol schools who served as non-retained matches had been recommended for retention but their parents did not agree; the follow-up interviews are analyzed here, resulting in a total of 10 cases for this group.

The FIRST GRADE RETAINED GROUP was selected primarily in include additional cases (4) from School D. As explained in Chapter 2, School D had been identified as a high retaining school, but actually had relatively few kindergarten retentions in the 1981-82 school year. An additional three children who had been retained in first grade were identified from control schools. The final sample in this group included seven cases with no attrition.

Non-response bias in the survey could be caused by both data missing from the sample and cases missing from the population (perhaps because they left school before the end of first grade). In the two major groups sampled, the non-response rates were 29 percent and 27 percent, respectively. In both groups, two matched pairs with non-English speaking families were selected (for the Chapter 2 analysis) but without the intention of interviewing the

parents through the school interpreter; if these cases were not counted as nonrespondents, the nonresponse rates drop to 25 percent and 23 percent, respectively. In both groups, half of the "not reached" cases were instances of disconnected phones, suggesting that these families might be more mobile than the respondent group. It is difficult to say in what direction this might bias the results; but this type of non-response was balanced across groups.

The omission of cases from the population (i.e., children who were in essence not available for study) occurred disproportionately from the high retaining schools. As noted in Chapter 2, the high retaining schools also had the highest rates of attrition. To the extent that children might have left to avoid the retention, the opinion of their parents is underrepresented.

Instrumentation. The questions addressed in this study were answered by means of a telephone survey conducted by either the first author of the study or a research assistant. Both are highly trained and experienced in interviewing. The interview was semi-structured, using a questionnaire with both open-ended items and items with ordered scales (see Appendix) Parents were informed that their responses were confidential and that they had the right to refuse to respond to any question. Two refusals were encountered. Parents were informed that the interviewers were independent of the school district, that results would be summarized and reported to the district, but that no

information revealing the identity of an individual child would be reported. Interviews ranged in length from seven to 35 minutes. The interviews were tape recorded, and the tapes transcribed verbatim.

Analysis. For purposes of reporting the results, the respondents were divided into four groups: 1) parents of children who spent two years prior to first grade, either by virtue of retention in kindergarten, placement in pre-first, or by selection into a two-year program (RETAINED GROUP); 2) parents of children who spent only one year in kindergarten but who were matched in age, sex, and measured level of readiness with the children in the first group (NON RETAINED GROUP); 3) parents of children who were recommended by school personnel either to be retained or to spend two years in kindergarten, but who refused the recommendation and went immediately into first grade (RECOMMENDED/NOT RETAINED GROUP); 4) parents of children who spent only one year in kindergarten but were retained for an extra year in first grade (FIRST GRADE RETAINED GROUP). The rationale for this division is evident. Questions were not equally applicable to all groups. Parents of children who spent only one year in kindergarten, for example, were not asked to describe the benefits of retention for their own children.

Descriptive statistics were computed for the scaled items (e.g. "How ready would you say your child is now for the second grade?") and compared across the four

groups. Qualitative analysis techniques were used to categorize the verbal responses to open-ended items (e.g., "Now looking back, what would you say are some of the benefits and drawbacks to having your child spend two years in kindergarten?"). The qualitative analysis was performed by the second author in accord with guidelines from Miles and Huberman (1984). Quotations from the interviews were selected to depict the range of beliefs with regard to a particular question. In other words, the responses to a particular question were listed. Redundant responses were deleted. From the remainder, the analyst selected responses that were most positive and most negative in attitude valence. Other responses were selected to typify substance as well as points along a continuum of positive to negative attitude valence. The selected comments were altered only to the extent of maintaining confidentiality of the parent and child and to correct grammar and syntax. The editorial modifications were slight and did not distort meaning. To maintain continuity of narrative presentation, interviewer questions and probes were omitted.

RESULTS OF THE SURVEY

PARENTS PERCEPTIONS OF READINESS FOR KINDERGARTEN

The parents were initially asked to think back to the time when their children entered kindergarten. At that time, did they believe their children were ready for

school? Responses within subgroups were categorized according to whether the parent had doubts about the child's readiness.

RETAINED GROUP. Of the 30 parents interviewed in this subgroup, 17 had some doubts that their children might not be ready for kindergarten. Ten had no doubts--at the time, they believed that their children were ready for school. Three believed that their children were more than ready. Comments from the retained group are excerpted below.

"She was definitely immature, emotionally immature, still very clingy to the family. When she was in preschool her teacher suggested that she might not possibly be ready. She is very small and still pretty childish."

"There were definite questions about his readiness, simply because of his birthdate, he didn't have the maturity to handle a straight kindergarten situation."

"Well, I didn't think that much about it. I just assumed that he was five years old and therefore ready for school."

"Basically, I felt that he was ready. He had two older children in the family. He knew his birthday, his address, he knew the numbers, the letters. He knew just about everything."

"He was very excited to go. We felt like he was prepared academically just because he had the basic letters and colors. We felt really comfortable with him beginning."

NON-RETAINED GROUP. Of the 28 parents surveyed in this group, only 6 remembered doubting whether their children were ready for kindergarten. Sixteen had had no doubts, and six remembered their children as being "really ready" for kindergarten. Remember that the NON-RETAINED GROUP was selected to be comparable to the RETAINED GROUP

in chronological age, sex, and readiness score on the Santa Clara Inventory. Therefore, what differentiated the two groups of parents was their perception of their children's readiness rather than the objectively determined readiness. It should be emphasized that all the data gathered for this chapter that call for the parents to recall events and perceptions one or two years old are subject to problems of retrospective interpretation. In other words, the parents' report of the child's earlier lack of readiness for school may be due to actual lack of readiness, the parents' memory of the teachers' judgment of the child's lack of readiness, or some kind of mental adjustment (i.e., if the child was subsequently retained, there must have been prior reason for this action, so the parent rationalized). These various possibilities can not be unraveled.

Two excerpts have been selected from the responses of this group.

"I thought he was very ready, both socially and academically. He had gone to preschool for two years and had shown good progress there and had been very interested in learning and numbers amd shapes and so on. He had not shown any problems or any difficulties and so we didn't have any hesitation at all about sending him."

"My husband and I really had some doubts as to whether or not he was really ready, because he was on the young side [entry age-5.1], the cut-off dates indicate he was just a few months away. Probably the thing that pushed us over into going ahead and admitting when we did was the fact that he has two close friends in the neighborhood who were going to school for sure. The whole summer, that's all they talked about. He got caught up into that and was real excited."

RECOMMENDED/NOT RETAINED GROUP. Of the ten

parents in this group, three remembered having doubts about whether their children were ready for kindergarten, four had had no doubts, and three had thought their children were really ready.

"I wasn't sure he was ready for school but I thought kindergarten would help him prepare for it."

"I thought she was ready for kindergarten. She practiced her alphabet at home and she knew how to write her name and as far as I knew that's basically what they began to learn in kindergarten."

FIRST GRADE RETAINED GROUP. There were seven parents surveyed in this group. Of these, two had had doubts about their children's readiness for kindergarten, the rest had no such doubts.

"I thought he was ready."

"I guess I had a certain amount of worry. I wasn't sure because she hadn't had any real preschool experience."

Concerning the children's perceived readiness for school, the parents were asked whether they had considered starting their children in kindergarten a year earlier or a year later than they did. One third of the parents in the RETAINED GROUP had considered this possibility. Only one parent in each of the other three groups had considered the possibility. The child's age matching the district entrance requirements, his or her eagerness for school, or the fact that friends or neighbors were entering school were named as the important influences in starting school when they did. Comments from the parents in the RETAINED GROUP are excerpted below to represent

their thoughts about the timing of kindergarten entrance.

"At the time of the introductory meeting with the principal, I remember them saying that some young boys weren't ready for kindergarten. But he was always so intelligent that we just assumed that he would do fine."

"He was young [entrance age 5.4], but I thought I would give it a try. He didn't have a lot of children his age to play with so I thought in that way it would be good to be around children his own age."

"I didn't consider waiting another year. My feelings were that if she didn't make it she could always repeat it."

"Socially, emotionally, and even physically, I wasn't sure she was ready for it,and we were looking into keeping her at home another year, but then we found out about the two-year program, so we tried that instead."

"We kept him out an extra year because, if we hadn't, he would always have been behind."

The parents were asked about their children's pre-school experience, the number of years attended and whether it had contributed to their children's readiness for kindergarten. The number of years of pre-school reported by the parents in the four groups is as follows.

RETAINED GROUP	1.39 YEARS
NOT RETAINED GROUP	1.08 YEARS
RECOMMENDED/NOT RETAINED	1.09 YEARS
FIRST GRADE RETAINED	1.00 YEARS

Most of the parents who commented on the pre-school experience believed it contributed positively to their children's readiness for school in that the children

participated with other children and learned how to sit quietly and pay attention to a group activity. Some parents mentioned pre-school as a source of competitive advantage to some children when they go on to kindergarten. The fact that pre-schools teach attending skills and to some extent pre-academic skills, puts children who do not attend pre-school at a disavantage. This is particularly true when kindergarten teachers assume that all children have the background that only some pre-schools apparently provide. The following quotation from a parent in the NONRETAINED GROUP illustrates:

> "The pre-school helped just because she was with other children. It wasn't an academic type of preschool. They didn't sit down and teach them math or anything like that. You know that is what some preschools are doing nowadays. Now that I can reflect back upon it, I would have probably sent her to a different kind of preschool where they would have taught her the basics, because most of the kids here in our elementary school, by the time they start kindergarten they already know all their alphabet and they are almost already reading."

Screening and orientation played an important role in the children's initial contact with the kindergarten. Forty-three percent of the RETAINED GROUP reported that their children had participated in some kind of screening program. The following comments were chosen to typify the range of comments about screening and its results.

> "There was a variety of tests done on the children. How high they can count, how well they know their ABC's, their colors, how they spell their name, if they knew their phone number, if they can tie their shoes, if they can count by

fingers just by looking at the fingers, knowing what numbers they were, if they could match pictures. The results showed he was ready."

"The pre-screening at the school showed that she was ready for a Level One kindergarten but not a Level Two, so we went along with the test results."

"They did test him, and they called me up and told me. I was hoping that he would go right into Level Two, of course, but they told me he was borderline and that emotionally he probably would do better to be put into Level One. Academically he was right up there but their recommendation was that he be in Level One. After doing enough thinking I decided that probably would be best."

Fewer parents in the NONRETAINED GROUP (36 percent) reported that their children had participated in screening. Typical comments were the following.

"Childfind did an evaluation and found out he was going to be okay."

"Childfind identified an articulation problem, but we took her to a a speech and communication disorders center and they told me the Childfind results were absurd, that the problem was something she would just grow out of, so we started her anyway."

"The screening program was really thorough, it covered writing, understanding, how he got along with other kids. He didn't do real well on all of them, so they put him in Learning Lab that really helped. He improved 100 percent in just a few weeks."

Although 45 percent of the RECOMMENDED/NOT RETAINED GROUP reported that their children participated in a screening program, few had comments on it. Two typical comments follow.

"The Childfind program found that she was really basic."

"The school asked us to participate in a screening program, but we declined."

None of the FIRST GRADE RETAINED GROUP participated in screening.

In the RETAINED GROUP, only 10 percent reported attending any orientation beyond a kindergarten round-up or receiving a handbook. The three parents who commented on orientation said this.

"They talked about what would be covered, what they'd be doing, what they expected as far as readiness of the child, and basic format of their activities and so forth."

"The principal, teachers, and speech teacher all said basically the same thing, that the children are there to learn. School kindergarten is not fun and games, that they're very serious about teaching and training them. They said they would be testing them in a couple of months time and if a child was not capable of continuing, the parents would be asked to keep him out a year."

"They told us that many boys of his age are generally not ready for kindergarten."

Fifteen percent of the NONRETAINED GROUP reported attending an orientation program. The two parents commented as follows.

"It was a very basic orientation. I do recall one of the questions brought up by one of the parents was regarding academics in kindergarten, if there was a reading program for children who did know how to read. The principal said that at this school kindergarten really wasn't geared towards that type of program. It was more, I guess, a socialization kind of thing. If there were any parents whose children were already reading or heavily involved in academics, that they might be happier if their children were in another type of program."

"It was pretty enlightening especially if this was your first child. It just basically told you what they were going to be like, their format of the daily activities, what days they would be having gym and music. It gave me a real good idea

of what she would be going though."

Eighteen percent of the RECOMMENDED/NOT RETAINED GROUP attended an orientation program. One parent had this comment.

"I felt that the entire purpose of the principal's speech was to tell us that any little boys who had just turned five were not ready and they would probably be held back."

No parents in the FIRST GRADE RETAINED GROUP reported attending an orientation program other than an informal kindergarten roundup meeting.

PARENTS' PERCEPTIONS ABOUT KINDERGARTEN PROGRESS

Almost every parent in the RETAINED GROUP remembered well what they had believed and felt about their children's progress through the first year of kindergarten. The comments were diverse, and we present excerpts from twelve of the interviews to depict the range of these comments.

"We were happy with his progress. We were happy also that he really enjoyed the year. He still has a super strong feeling about school--he loves it. We were happy with the way his teacher managed to develop that attitude toward school. He seemed to be picking up a lot of skills. But at the spring conference the teacher told us what happens to boys who are pushed ahead of where they should be. He just didn't have the social skills."

"We felt at that time that she was doing pretty well and whatever testing they do at kindergarten, she was at the 49th percentile. It turns out that she was average. So at the time we didn't see any special need."

"I think he progressed but in relationship to other kids I don't know how much. He's got a large vocabulary and he seemed to be more advanced

than some of his friends but it turned out that he wasn't emotionally ready. he wasn't ready age-wise, I guess."

"We were very concerned because we knew he'd had problems and in the parent-teacher conferences that we attended during that year, the teacher also expressed some concerns about his inability to deal with things, and he was just very easily frustrated. That was the thing we noticed most. He disliked school intensely. The report card indicated he was doing satisfactory work, but it just wasn't what most people would expect from a kindergartener."

"Her speed just wasn't enough even if you extracted the social adaptability. She was in that category which was obviously not normal. I was conscious that she struggled through kindergarten, always a little behind, a little bit slow."

"Well, to tell you the truth, we weren't aware of anything during the kindergarten year until the very end. Then the teacher said that the school was 'granting' him this extra year."

"I was somewhat disappointed. I felt he could have and would have done a lot better had he had a teacher that would have worked with him. She never said anything like he wasn't ready for kindergarten or anything. She just said that he had behavioral problems and that sort of thing. He wasn't doing that well academically, as well as he could have. What good he did do is because myself and my husband worked with him at home."

"He had done very well compared to what he was before he started. But he wasn't ready for first grade, I felt, because he didn't have any desire to read stop signs or look at railroad crossings or things I noticed other kids that were in kindergarten did. He was antsy, he couldn't sit still. The report card said that he could do the work, but wasn't mature enough."

"He had stopped talking baby talk and seemed to catch up to his letters but his teachers thought he was too young to be there and would probably repeat, so they didn't give him a first grade readiness program. There was not much readin', writin', and arithmetic. Instead there were a lot of animals and centers and blocks."

"We transferred into the district near the end of her kindergarten year. From her other

school we knew that her attention span was too short. But the teachers here gave me no feedback. They said that since they had known her only a couple of months, they could not assess her progress."

"He was screened into the Level One kindergarten. He had a wonderful kindergarten teacher, and I felt that he really progressed from the first of the year to the end of the year. I could see--and I know that a lot of that had to do with being a year older--how well he did."

"His maturation was just not there. But the teachers could have done more to correct the problems than they did. Their excuse was, 'Well, we're teachers and we're not trained in working with these young kids. We're trained to teach the children and get them ready for first grade.' "

The parents of the NONRETAINED GROUP presented a strikingly different picture of their children's progress in kindergarten. The predominant comment was that the child was doing fine at that point. Remember that the children in the NONRETAINED GROUP were matched for age, sex, and school readiness scores with children in the RETAINED GROUP. The following comments were chosen to depict the range of beliefs in the NONRETAINED GROUP about the children's kindergarten progress.

"I had talked with his teacher and he improved greatly during kindergarten. I guess he matured a lot during kindergarten. I don't think it's so much in reading and writing or any subjects they took but I think he learned to react to people a little bit differently. His report card said that he had improved greatly and he still had a lot of improving to do in some of the subjects and in social interaction he was improving."

"I was pleased basically. The only thing that they told me that she should work on during the summer was some fine motor tasks. They didn't like her printing."

"We felt he did well. He attended the

Learning Lab during kindergarten for awhile, and he was able to complete that for so many months, and then they felt like he was alright, and we felt that he had progressed okay. And it's difficult. He's I think a little bit more immature. And also he is in classes where people have held their children back a year. He's competing against those children that are a year older than him, and in that respect I think that might create some problems, but he seems to be doing all right. He has to work a little harder."

"I felt it was very good. He seemed to show pretty normal if not a little above normal growth intellectually. He didn't seem to have any less level of curiosity. It certainly didn't seem to harm him."

"I felt that she had made moderate progress. I personally don't believe in pushing them real hard for achievement. She met my expectations. The report card said that her progress was satisfactory to excellent. A few 'need improvements', mostly in her handwriting and that sort of thing. They seemed to think that maybe her reading readiness skills were not up to par. But generally it was satisfactory."

"At this school, they don't seem to mind too much about pushing achievement in academic areas, so things went fine."

Parents in the RECOMMENDED/NOT RETAINED GROUP provide a picture of conflict with the school in respective perceptions of the children's progress in kindergarten. Typical comments are the following.

"I had a disagreement with the teachers in kindergarten. Basically I felt that kindergarten was a time for socialization, getting patterns of learning. They more or less stressed certain achievements. You had to know all your colors, you had to know how to count to 100 and she could do all those things but apparently not to their liking, which I didn't approve of. I felt that she had achieved what she needed to achieve in kindergarten and there was no need to put stress on the child at that point. The report card said that her rate of progress was alright but that she shouldn't go on to first grade."

"I thought he was completely different from

the way the teachers saw him. She suggested that I hold him back. All of the conferences I had until the last one reported that he was doing fine. Then in the last one they said he was socially and developmentally young, he didn't contribute to the conversation. During free time he wouldn't do anything constructive, just play with the trucks and blocks and that sort of thing. But he knew all his colors and stuff and I didn't think it would be fair to him to have to go over all that again."

"His progress was fine, and the report card said he was absolutely exceptional across the board. In the spring his teacher approached my wife saying that he was developmentally young and the school wants to hold him back. The Gesell was big in our neighborhood then, and the school wanted to hold back over half of the class until they are developmentally correct."

"We felt he made no progress at all (in kindergarten)."

"I was very pleased. She became confident and she had a good experience with kindergarten. There was concern because she couldn't follow long directions. The problem was immaturity, but her academic work was fine."

"We were somewhat disappointed with it. The teachers had segregated him pretty much from the rest of the kids in the class because of his age [entry age 5.3]. They put him in this category that he was underdeveloped and that no matter what they would do he would continue that way. They structured his class around that fact. This was due to a prejudice in my opinion. They felt that because he was the first male child in the family and that he was on the younger side of five that he wasn't going to learn very much. We feel that he was discarded because of statistics."

Most of the parents of the FIRST GRADE RETAINED GROUP reported that their children made satisfactory progress in kindergarten. With some exceptions, therefore, inadequate progress in first grade was poorly predicted by what had happened in kindergarten. The range of comments is illustrated below.

"From what I could see from the work she'd bring home and what her kindergarten teacher shared with me, we had three conferences over that school year, and the teacher never really gave me any kind of impression that she was behind in any way."

"He had a hard time socially."

"His report card said he did super. He was a perfectionist. He worked very, very hard."

THE DECISION TO PROVIDE A TWO-YEAR PROGRAM

The parents in the RETAINED GROUP were asked to describe the process by which the decision was made to provide a two-year program for their children. They were asked about who initiated the decision, at what time, what tests were given and conferences held, whether there was any disagreement, what reasons were given for the decision, what their feelings were at the time, and whether they were ultimately satisfied with the decision. The two-year program involved either a retention for a second year in kindergarten, a pre-arranged two level kindergarten, or a year in kindergarten plus a year in a pre-first grade. Categories of responses were formulated, and the following nine comments typify these categories.

"Through the Childfind program he was screened into the Level One kindergarten. There were some areas that he just wasn't ready. He was still more into playing than actually learning. The two-year program was decided at the very beginning. At the end of the first year we were given the option of putting him into Level Two or first grade. We felt because of his birthday, he just wasn't ready for first grade. His teachers and we were in agreement. There are definitely kids who have a need for this kind of program."

"There was some question in my mind about having her stay out of school another year versus having her repeat kindergarten. The teachers said

it was really up to me, so I went ahead and put her in. I made the decision to have her repeat because of her birthdate [entry age 5.1] and what the teachers said. She had learned some things but not as much as she could have. Her progress was just average. She could have gone on to first. I started talking to her about repeating around November, and her teachers thought it was a good idea. They pointed out that she wasn't using scissors right and that she was the youngest one in the class. Academically she could handle it, but the problem was more with maturity. The teachers were very objective and not pressuring at all. They just laid it out for me, and there was no disagreement at all. I was satisfied."

"The teachers approached us in November . They said he wasn't ready for kindergarten. We wanted to wait another month to see if he improved or if it was just the thing of getting used to kindergarten, to see if he could turn it around or if the teachers could work with it. But then they approached us again and said that he just was not ready and that he would get up and walk around and not pay attention. That wasn't good enough for me. I was looking for a better excuse than this, like whether he was having trouble verbalizing or socializing, but that's all they would tell me. He knew his alphabet and his numbers. We asked the teacher, 'aren't you able to handle him?' She just said that she wasn't trained to handle children so young. What they were up to, I guess, is weeding out the younger five and a half year-olds and just taking the older ones that will sit down and listen to instruction. But he just turned five at the beginning of the year. Other kids of his age in our neighborhood were also asked to stay out another year so that when they come in at six years old they will fit in more with the teacher's program. Although we disagreed with the teacher, we basically didn't want to buck the system. We thought that if we kept him in, that it would just cause more trouble for him. We won't know for several years whether this decision helped or hurt him. We more or less accepted it and learned to cope."

"The teachers first suggested that he repeat. I saw that he had no interest in reading and he couldn't stay in one place long enough. They said that he should go through kindergarten again because he just wasn't mature enough, although he could do the work. I discussed it with him. I didn't want to hold him back without him being

aware of what was happening. I told him, 'you know, you're not doing real well in school, you're not ready to go on.' He couldn't read very well to me. He could pick out just words or guess by looking at the picture what the story was about. I told him, 'what do you think, if I hold you back, will that bother you?' He said no. I probably would have done it anyway because it was the best thing for him. He seemed to accept it."

"It was in January. They called me in, and at the time they hadn't said it was something really serious or my husband would have gone in. It was both teachers and the principal telling me that behaviorally and socially he was behind, and they felt that he needed some more time in the kindergarten situation to catch up with the other children. And again, they said academically he was fine. It was just that in those other areas he was about six months behind. I had a lot of feelings. I was sure at that time that they were mistaken about him. I was just so shocked. You think everything is alright, then all of a sudden you find out it isn't, especially with your first child. I didn't take it real well. I got really upset. Not having my husband there and feeling really out numbered three to one was really intimidating to me. Later, he went through some testing, some kind of developmental test. The psychologist said he wasn't ready for first and suggested a transition program. We tried to get him in one, but couldn't. At the end of the summer we had to make a decision, so we just went along with what everybody told us and had him repeat kindergarten. We learned to live with it, but looking at him now--he still has some behavioral problems--makes me wonder whether anything was gained."

"His progress was disappointing, but part of the problem was the teacher. Several mothers in the class felt that teacher was really bad for boys. The girls didn't have a problem but the boys did. Their learning needs just weren't attended to. Right towards the end of the year the teacher started talking about sending him to pre-first rather than first grade. She said that he was not mature enough. She didn't feel that he was ready to be thrown into first grade where he was going to have to do more learning. A conference was called, and since I had already made my feelings known, I requested a screening teacher from another school, somebody who would be objective. The teacher had suggested that the Gesell be given by the specialist. The lady who

did the testing recommended the pre-first, and after talking a long time with her, we agreed. I didn't resent the recommendation at all. It had been a lousy year, and putting him into pre-first was the best thing that could have happened to him. But I don't think he would have had to. I think he could have gone on to first grade if he had had a more qualified kindergarten teacher."

"The teacher was pretty vehement about letting him repeat. She said that academically he was ready but not emotionally. She quoted studies about pushing kids. She told us that according to district policy, the decision is up to the parents, but that she would include in the folder something to the effect that she suggested he be held back. In the event that further on if we pushed ahead and there were problems the school wouldn't be held accountable. We decided to go along with it, but had mixed feelings. You always worry that maybe you're going to put your kid through something that he shouldn't be put through but I think I had more positive feelings about it than negative feelings. I can see at home and around his friends exactly what she was talking about. It was just being pointed out to me. Now we couldn't be happier."

"I didn't know what was considered normal. The last day of school the teacher called me in and said, 'she's not doing as well as expected, so therefore she should go into pre-first.' It was a surprise, because I had been talking to the teacher all year, and everything had been satisfactory. I always asked her, 'is there anything I need to do at home?' and she always said no. The teacher said that my daughter would probably have a hard time if she went into first grade. Because she hadn't done everything the way they wanted it done all year. They were having this new program called pre-first and she was a prime candidate for it. She just kept on insisting. I wasn't pleased because I wish she would have told me, because I had asked her all year about what I could do to help my daughter at home. And she said nothing, nothing, nothing. Teachers are trained to know when there's a problem. They shouldn't just wait, especially when a parent asks. And all of a sudden. That's not fair. I would have done anything to help her. I think the program helped her more than hindered her. But I would never want to go through this again."

"It was the first grade teacher who brought

it up. He had gone to kindergarten in a different district that doesn't emphasize academics as much as Boulder does. There they believe that kindergarten is for socialization and learning how to learn. Here the first grade teachers want the kid to already know how to read, almost. My son was the lowest in her first grade class in reading, so she suggested that he be sent back. It took my husband and I a long time to decide, but we finally decided to do it. But I still have trouble understanding the differences from one district to another."

In examining the data on kindergarten progress, we note that the parents in the RETAINED GROUP experienced considerable emotional conflict about the decision to provide their children with two years of school prior to first grade. Only seven percent reported that the decision was their own idea, and another seven percent reported that the decision was initiated jointly by themselves and the school. In 85 percent of the cases the decision was initiated by the teachers. Concerning the timing of the decision, the parents reported the following distribution of times at which the decision to provide a two-year program was first mentioned.

Prior to kindergarten	25%
At the beginning of kindergarten	12%
At the end of the first quarter	16%
Midyear	20%
At the end of the third quarter	9%
At the end of kindergarten	9%
During first grade	9%

About three-quarters of the group who provided data on this question reported that some kind of testing had

been done to shed light on the decision. One third of the group described some disagreement over the decision during the time when it was being made. Yet apparently the disagreements were resolved because only seven percent reported being dissatisfied with the results of the decision. The accommodations and adjustments to the two year program were made by parents in the RETAINED GROUP, even by those who initially had objected to it. Comments about the benefits and drawbacks were categorized and are paraphrased as follows.

BENEFITS

Made him more prepared for first grade
Gave her more self-confidence
Helped more than it hindered
Gave him an extra year to mature socially and in motor development
Now he's one of the older rather than one of the younger ones in his class
Now she is closer to the top of the class rather than closer to the bottom
Best thing I could have done for him
He is the biggest in class, so he is popular
It would have been harder to repeat first grade than it was kindergarten
Intellectually it gave him a good basis
Many other boys in his class were held back, so he wasn't alone
It put him in "a striving ahead position"
The gift of time--that is the best way to describe it
It was better than having to struggle through
Going over the same stuff gives her an advantage over the other kids

DRAWBACKS

She is very large compared to the other kids
Everybody comments that he should be in third grade now
He feels like a failure even though we tried to present it positively
His friends went on, while he stayed back
Kids tease him
He is bored repeating the same material twice
He is too confident; since he has had the same

stuff before, he rushes through and that's giving him bad habits

POST KINDERGARTEN PERCEPTIONS HELD BY THE OTHER GROUPS

Parents of children in the other groups were asked whether they had ever considered retaining their children for a second year. Only one of the 24 parents in the NONRETAINED GROUP had given any thought to this possibility. The comments of this group can be illustrated as follows:

"It never entered my mind."

"There was no reason for it--no problems at all."

Similarly, only one of the 10 parents in the RECOMMENDED/NOT RETAINED GROUP and one of the 7 parents in the FIRST GRADE RETAINED GROUP had ever entertained the possibility of a two-year program for their children.

All members of the RECOMMENDED/NOT RETAINED GROUP reported on disagreements with the school over the decision. This should be obvious by the definition of the group. It consisted entirely of children whom the school had believed would benefit from a two-year program. Yet in each case the parents had had a different perception--that their children had no or inconsequential problems and were in fact ready for first grade. Here are some of the stories they related about the decision-making process.

"The teachers told me that the first day of school they could tell he was not ready. This is totally biased. I'm sure they looked at his birthday and said, 'Well, he's a little boy, he was born in July, he's not ready, we're not going to work with him.' And they didn't. There's a

lot they could have done with him, but he was assigned to the water table, played in the sand. After he had accomplished tasks he was assigned to do, he was not allowed to go on. Then they said he should repeat, but we said, absolutely not. He's a normal child, and any normal child can get through kindergarten. He's going on. The teachers started being real pests. I was getting notes. I was getting phone calls, any little thing he did out of the norm, I would be notified and it would be pointed out that he was developmentally unprepared. We insisted he go on, and they put down on the form that he was going on based on the parent's decision."

"They told me that whenever he had a choice, he would choose play and not work. They brought in volunteer mothers to do the developmental testing. They came in and began asking him questions. He didn't answer because he didn't know how to appropriately behave. He's been taught not to give information to strangers, and these testers were strangers. He has known since he was three what his phone number and address is, but he wouldn't tell these women, so he was graded down, he came out developmentally unready. Test conditions were totally inappropriate. The teacher didn't want him to go on to first. I said absolutely not. I know my child and what he is capable of and I don't care what the teachers think."

"In the November conference the teacher seemed to hint that he wasn't going to be ready for first. I went in and observed the class and found him to be functioning at the same level as the other kids from what I saw. At the end of the year when his report card came home it just said it was the parent's choice whether or not to send him on. There was never any verbal exchange at all. There were many people in the neighborhood in the same situation."

"The teachers wanted to retain him, but I worked with him through the summer. I felt he was ready for first grade, and he was."

"One of the teachers mentioned repeating in the first two weeks of kindergarten. She discussed it from the standpoint that there was a study done back east that showed the first male is always much slower in their development and that combined with the fact that he was an early five, and she just said that there was a very good possibility that he would not develop with the rest

of the kids. It was like she was going to prove this study to be correct in his case. We told her we didn't approve. So we let him go on to first."

"The kindergarten teacher wanted to hold her back, and I don't know why. Maybe it was because the school district seems to hold back a lot of kids. Or maybe it was that someone had read something about readiness. They asked us to come to a parent meeting to hear about developmental readiness. But whatever, it couldn't be because of her academic work. We decided against it, because we didn't want her labeled for nonsuccess. We decided that she may have to struggle all through high school, but whatever she has to do, she can do it. We wanted to give her this vote of confidence from her parents."

PERCEPTIONS OF FIRST GRADE PROGRESS

This survey was taken at the time the children were at or nearing the end of first grade. In other words, children in the RETAINED GROUP had completed two years of kindergarten plus one year of first grade. Children in the NONRETAINED GROUP and the RECOMMENDED/NOT RETAINED GROUP had completed one year of kindergarten and one year of first grade. Children in the FIRST GRADE RETAINED GROUP had completed one year of kindergarten and two years of first grade. The parents were asked four questions, and for each, provided a scale for responding. Thus, the responses could be quantified and subjected to statistical analysis. The means, standard deviations (S.D.), standard error of the mean (S.E.M.) and number responding (n) are provided for each question and each subgroup.

"NOW AT THE END OF FIRST GRADE, HOW WOULD YOU DESCRIBE YOUR CHILD'S PROGRESS IN SCHOOL SUBJECTS?" (Doing extremely well = 5; Having serious difficulty = 1)

GROUP	RETAINED	NONRETAINED	RECOMMENDED NOT RETAINED	FIRST GRADE RETAINED
MEAN	3.38	3.43	3.46	3.14
S.D.	.82	.42	.52	1.07
S.E.M.	.15	.08	.16	.40
n	29	28	10	7

"HOW WOULD YOU DESCRIBE HIS ATTITUDE TOWARD SCHOOL?" (Very positive, loves school = 5; Has a very negative attitude toward school = 1)

GROUP:	RETAINED	NONRETAINED	RECOMMENDED NOT RETAINED	FIRST GRADE RETAINED
MEAN	3.93	4.50	4.36	4.14
S.D.	1.14	.75	.81	.90
S.E.M.	.21	.14	.26	.34
n	30	28	10	7

"HOW WOULD YOU DESCRIBE HIS (HER) RELATIONSHIP WITH HIS (HER) PEERS?" (Is very popular, gets along very well with peers = 5; Has a great deal of difficulty getting along with others = 1)

GROUP:	RETAINED	NONRETAINED	RECOMMENDED NOT RETAINED	FIRST GRADE RETAINED
MEAN	3.43	3.89	3.36	3.43
S.D.	1.01	.83	.51	.79
S.E.M.	.18	.16	.16	.30
n	30	28	10	7

"HOW READY WOULD YOU SAY YOUR CHILD IS NOW FOR SECOND GRADE?"
(Very ready, I expect him to be very successful in second grade = 5;
Definitely not ready, we expect difficulties = 1)

GROUP:	RETAINED	NONRETAINED	RECOMMENDED NOT RETAINED	FIRST GRADE RETAINED
MEAN	3.00	3.38	3.30	3.43
S.D.	.98	.81	.68	1.41
S.E.M.	.18	.15	.22	.53
n	30	28	10	7

Although any statistical significance testing on these data should be interpreted with caution, some conclusions seem clear. According to the perceptions of the parents, providing a two-year program prior to kindergarten is not related to any advantage in academic success, attitude toward school, relationship with peers, or readiness for second grade over comparable children who have only one year of school prior to first grade. The NONRETAINED GROUP and the RECOMMENDED/NOT RETAINED GROUPS appear to be better off than the RETAINED GROUP in attitude toward school. The RECOMMENDED/NOT RETAINED GROUP is more ready for second grade than the RETAINED GROUP, according to the parents. The NONRETAINED GROUP had better peer relationships than the others. The small number in the FIRST GRADE RETAINED GROUP make meaningful comparisons difficult. The absence of advantage for the RETAINED GROUP parallels the results of the first grade outcome study (Chapter 2). The evidence based on parent perception, therefore, confirms and strenthens the evidence based on achievement test results and first grade teachers' judgments.

CONCLUSIONS

The evidence from the parent survey indicates these is no average benefit of retention or two-year kindergarten programs on children's academic progress, attitude about school, relationship with peers, and readiness for second grade. The evidence from the parent survey corroborates evidence from the first grade comparison of retained and equivalent but non retained children. The identification of the subgroups called RECOMMENDED/NOT RETAINED provided unique information. The comparison of retained and non retained children is a comparison that crossed schools. In other words, a retained child was matched with a non-retained control child in a different school. Thus any effect of the school culture and quality is confounded with the effect of retention when one compares the means of two groups on some variable such as reading achievement or parent's perception of child's attitude about school. Nearly all children classified in this analysis as RECOMMENDED/NOT RETAINED were part of the culture of the high retaining schools and consequently are influenced by their qualities and effectiveness. In addition, they matched in entry characteristics those children who were both recommended and retained. Thus the data from this subgroup is particularly enlightening. These children finished first grade no different from the retained group in academic progress (as reported by parents) but had had only one year of kindergarten, whereas the retained children had had two years of kindergarten.

The RECOMMENDED/NOT RETAINED GROUP also provided an important perspective on conflicts between parents and schools. The

parents resisted the attempts of school personnel to persuade them of the wisdom of the two-year program. The parents' judgments about child development and progress in kindergarten did not correspond to the judgments of the teachers, they refused to acquiesce, and with no apparent deleterious consequences. We consider this group of major import in studying the consequences of retention policies. We believe that the ten cases reported characterize a far larger, but unresearched group--those parents who resisted the schools' recommendations by withdrawing their children from that school, finding another school within the district whose personnel have compatible judgments, or enrolling their children in private school. An administrator in a private school reported in conversation that her school was frequently used as an escape net for children whom the public schools wanted to retain in kindergarten. A mother of one such child provided us with a sad case history of her child's experience in kindergarten, the teacher's attempt to blame the child's failure on lack of readiness, and the parent's decision to place the child in a private school. Limitations on our resources prevented us from following up on such cases, but statements in parent and teacher interviews and excessive "lost" children reported at the end of the year convince us of their existence.

The reports of parents whose children were retained were variable. At the same time that the parents perceived that more good than harm had resulted from retention, there were also poignant reports of adjustment to perceived failure and discrepancies between age and grade, conflict within the families

and between family and school, and the like. Parents of children in the NONRETAINED GROUP were unaware of what could have occurred if their children had attended a high-retaining rather than a low-retaining school. Even though their children were equivalent in entry characteristics to those who were retained, the parents simply never considered readiness problems when their children started school and never considered the possiblity of their children spending two years in kindergarten. By the end of first grade, their children were not the worse for their ignorance.

CHAPTER FOUR

TEACHER PERCEPTIONS ABOUT YOUNG CHILDREN AND THEIR EDUCATION

In the absence of a district-wide policy, the kindergarten teacher is the key to understanding who is retained and how the decision to retain is made. This is not to say that the teacher makes the decision. In some schools, for example, the principal's policy is to let parents decide whether the children whom the teachers have recommended are to be retained, placed in a two-year kindergarten or a pre-first grade. The result of this "street-level" policy formation is one reason for the striking disparities in retention rates among schools in BVPS, a disparity that cannot be explained by average differences in intellectual ability, socio-economic status of the populations served, or other obvious school characteristics.

Does the principal play a role in retention policy? The principals in some elementary schools intervene between the teacher and parent in individual cases, as when, for example, they seek to convince the parent of the correctness of the teacher's recommendation. Or in some cases the principal may be sympathetic to the parent's objections to such a recommendation (See Chapter 3). But nothing in the teachers' statements to be presented in this chapter indicated that the principal played a role in forming a policy for his or her school that specified

what characteristics of a pupil constitute grounds for deciding between a one- or two-year program.

There are strong hints throughout the data in this study that neighborhood differences exist in the tendency to value whatever it is that two-year programs provide. In one school the teachers reported high incidence of parents keeping their children out of public school until they were six years-old (whereas they could have been enrolled a year earlier) and of sending them from kindergarten into a transition program known as K-1. In another neighborhood, the parents had enthusiastically endorsed the philosophy of "the gift of time" and supported the idea of a retention for a second year in kindergarten to provide their children more time to mature socially. In yet another neighborhood, teachers expressed frustration that parents had ignored their recommendation for retention because of social immaturity, the parents feeling that such an action represented an expensive luxury (see Chapter 3). Indeed there are differences among schools in retention rates arising from some shared values or beliefs held by parents in a neighborhood.

One other piece of evidence leads us to the conclusion that the teacher is the key figure in retention policies. Rates of retention in the schools are usually stable, but vary over time as teachers move from school to school. One school had a retention rate for kindergarteners of 0% in 1982 (the base year for the first grade study reported in Chapter 2), but changed kindergarten teachers the following year. The current teacher at that same school reported that 20% of last year's kindergarteners were retained for a second year. She also reported that she encouraged two mothers of chronologically young

but legally eligible children to stay home or in preschool until they were six years old.

For these reasons we have determined that studying the perceptions of the kindergarten teachers is a central part of this policy study. The principal method of studying these perceptions was the individual interview. Secondarily, teachers' perceptions were inferred from observing a few of them in class. The latter method, however, is not reported in this chapter. Finally, the perceptions can be inferred in part from the Judgment Capturing Method reported in Chapter 5.

METHODS OF THE STUDY

SAMPLE SELECTION

A list of 44 kindergarten teachers was supplied to the researchers by the district. The two teachers of multi-grade classes in mountain schools were deleted from the list. One teacher declined to be interviewed because she had never taught before and felt unable to provide the information requested. One teacher canceled the appointment due to a personal emergency, and another appointment could not be scheduled. All others on the list were interviewed. Due to a defective tape, one interview could not be transcribed, but extensive notes taken by the interviewer provided data sufficient to analyze. The evidence gathered can be considered an adequate representation of the population of BVPS kindergarten teachers.

INSTRUMENTATION

The method of data collection was the semi-structured

interview. Eight categories of information were specified in advance. If the content was not covered in the initial open-ended portion of the interview, then the teachers were asked directly for the information. The categories were as follows: 1) the characteristics of children that are unprepared for first grade, 2) the timing that such characteristics are revealed, 3) the best evidence of lack of preparation, 4) whether anything can be done for the unprepared children, 5) the perceived causes of good or poor preparation, 6) the teachers' view of first grade at their school, 7) their theories of child development, descriptions of their kindergarten, 8) their view of the benefits and risks of school retention.

Because of the semi-structured format, not all teachers were asked the same questions in the same order. We were committed to the idea that the most valid evidence is that which is elicited indirectly and spontaneously, so that the interviewee does not react to the real or supposed hypotheses of the interviewer based on the phrasing of the questions. What is lost with this method is the ability to assign numbers to the responses, since they were not elicited in standard form. The interviewer was the second author (MLS), an experienced interviewer and trainer of interviewing skills. The attempt was made to establish an accepting and non-judgmental atmosphere. The teachers were told the purpose of the interview and promised confidentiality of their responses. The teachers seemed willing to supply their perceptions and experience. The interviewer was impressed with their thoughtfulness, commitment, and willingness to speak. The interviews lasted one hour on the average with little

variability. They took place in the teachers' schools before or after school hours. The interviews were audio tape recorded, and the tapes (save one) were transcribed. Over 1,000 pages of interview transcripts resulted.

ANALYSIS

Every form of data analysis is a simplification. In computing a mean and variance from a set of 50 scores, for example, the analyst simplifies and reduces 50 pieces of information to two, the assumption being that the two statistics preserve the essential characteristics of the 50. The analyst of qualitative data strives to accomplish the same task--reducing the amount of information while perserving its essential form and character (Miles and Huberman, 1984). In the analysis of the interview transcripts, a list of 47 categories was developed from the working hypotheses of the study and from careful reading of one-third of the transcripts. The list of categories is presented in Appendix C. Then the transcripts were coded by reading each paragraph and attaching a code for each category that appeared in the content of that paragraph. An example follows.

PARAGRAPH EXCERPT	CODE
(At what point during the year can you make a judgment about whether a child is going to be ready for first grade?)	
Sometimes you can get the feeling at the beginning of the year, but not always. I don't like to make judgments like that, because as I told you, children can change so quickly. So I would say by March, by March the pattern is there. If they are still having difficulty	K-QUAL-TIME DEL-RATE

understanding and doing the things that the majority of the other children find easy to do, I begin to question the parent on whether they would be willing to let their children stay another year in kindergarten. Teachers disagree with this, even the first grade teachers here. I contend that a child gains more repeating first grade. But I'm not sure that these first grade teachers agree with me. I think that they think if a child is going to come into first grade, it is going to be a year of struggle and maybe a loss of self-image.	K-QUAL-CHAR C-NORM DEL-COMP R-DEC ALT-RET BENE-RISK FIRST-CONT STRUGGLE

The coded data were organized around the policy issues of the study as a whole. The transcripts were combed for coded data relevant to each issue, then excerpts from the transcripts were selected to illustrate the teachers' beliefs. The excerpts were edited only to the extent of modifications of syntax and grammar (the rationale being that spoken speech is a more informal medium than written speech and sometimes translates imperfectly). Interviewer questions and probes were deleted to provide continuity. However, care was taken not to alter the meaning of the information.

RESULTS OF THE STUDY

I. DIVERSITY OF BELIEFS

The most striking finding of this study is the sheer magnitude of differences in teachers' beliefs about the characteristics of young children and the best ways of educating them and guiding their development. As we began this study, it was not our aim to show that some of these beliefs are right and

others are wrong--neither the science of psychology nor the technology of early childhood education is so well-established that such judgments can be made. Rather our purpose in this chapter was to characterize the nature of the beliefs and the degree of diversity and even conflict among them. Such was the purpose that governed both the interviews and the analysis. However, belief systems are like formal theories in that they can be criticized for their logical consistencies and fit with existing evidence. We invite the reader to use the review of research and theories presented in Chapter One as a template for reading about the teachers' informal theories presented here.

Two dimensions of belief were identified as particularly salient in characterizing the teachers interviewed. The first concerned perceptions about the fundamental processes of child development, whether children become prepared for school by a natural, evolving process internal to the child, or whether they become prepared for school through events external to the child, in its environment. This dimension of belief runs through all formal theories of child development and indeed through the history of philosophy, so that it is not surprising to find the teachers making statements that place them along the same theoretical continuum from nativist to environmentalist. The second dimension of belief, related to the first, concerns whether teachers can alter the level of preparation of individual children who present themselves for kindergarten and what the effective intervention might be.

Through the method of qualitative analysis described in the previous section, the teachers were tentatively placed on a two-

dimensional grid to represent their beliefs relative to nativism/environmentalism and remediation. Ten categories of statement were used to infer a teacher's location on this display: general beliefs about development, rate of development, evidence about lack of preparedness for school, the possibility that an unprepared child can catch up with his or her peers, the possibility of influencing the level of preparation, the causes of lack of preparation, what the teacher can do, what the end-points of kindergarten are or ought to be, perceptions about first grade, and dealing with heterogeneity in the classroom. These categories were considered the raw material for inferring the teachers' beliefs and perceptions about young children and their education.

This placement was fairly unequivocal for most of the teachers. In other words, the teachers had expressed their views clearly enough to be categorized with a high degree of certainty by the analyst. Such was not the case for two teachers whose statements in the interview were ambiguous with respect to the dimensions chosen, and their comments were excluded from further analysis and presentation. The display showing the distribution of teachers is presented in Figure 4:1. The first dimension is ordered from left to right, representing gradations of relatively greater environmentalism on the left to relatively greater nativism on the right. Teachers nearer the middle of the dispaly were so placed because they made statements that qualified their views. For example, if a teacher stated that the child's development is governed by an internal clock (and most other

statements confirmed that view) but also stated that a structured pre-school is necessary to assist development, that teacher was located closer to the center of the display than teachers who claimed that prekindergarten experiences have little or no influence on development. Notice that the display is skewed to one side. None of the teachers were radical environmentalists, as might be exemplified by followers of the Better Baby movement who feel that even infants have the capacity to read and comprehend given enough prodding. With regard to the other end of this continuum, one would have to look a long way to find exponents more nativists than the teachers interviewed in this district.

Teachers were then located on the other dimension of the display that represents their views on the possibility of intervening in a child's preparation. Excluding those who believe that no remediation is possible, the remainder made up three types of intervention that the proponents believed effective. The completed display revealed four sectors, or groups of teachers with identifiable clusters of beliefs or informal theories.

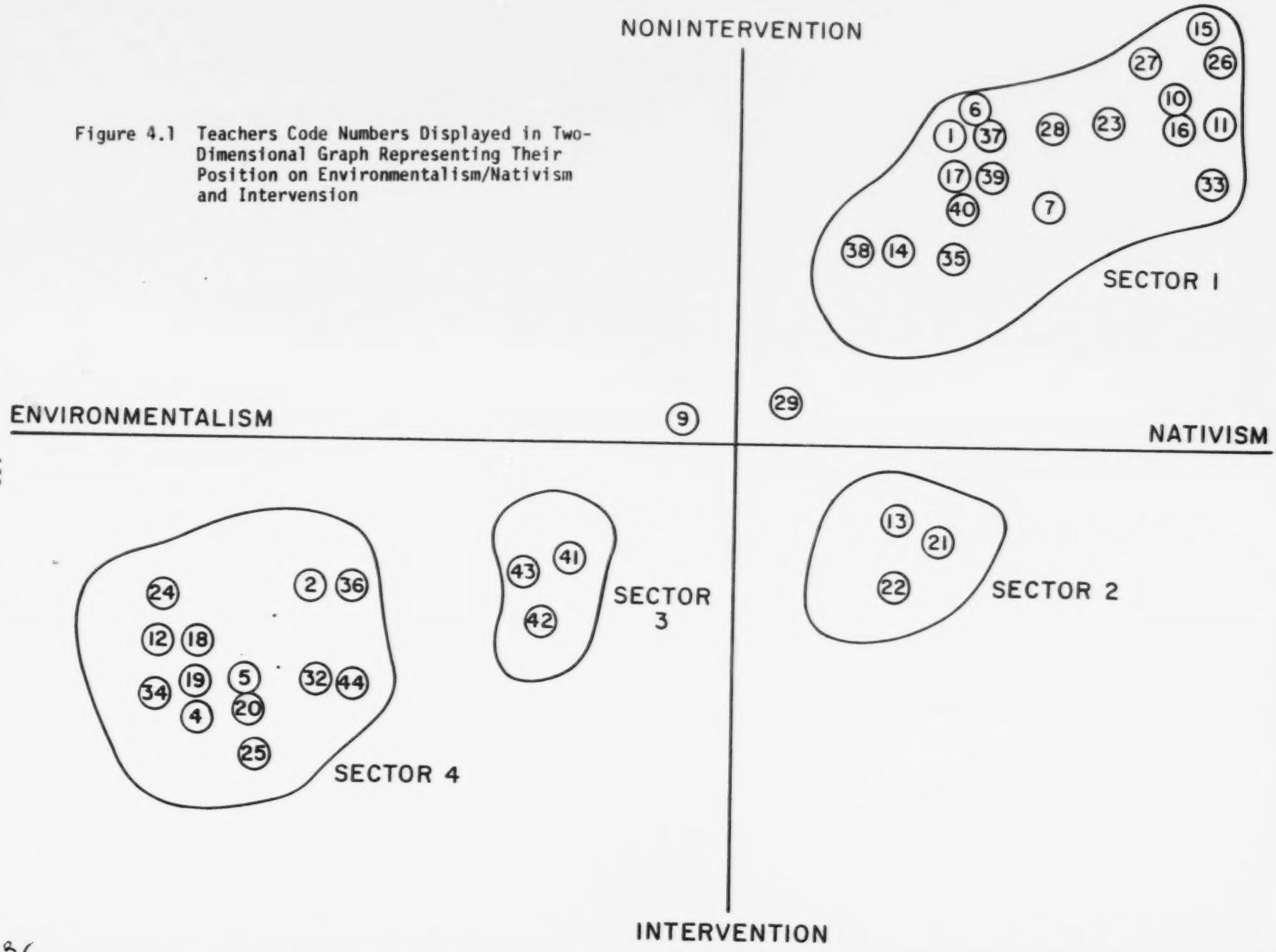


Figure 4.1 Teachers Code Numbers Displayed in Two-Dimensional Graph Representing Their Position on Environmentalism/Nativism and Intervension

The next step in the analysis involved selecting statements from the transcripts of teachers in each of the four sectors to illustrate their beliefs relative to the ten categories of information. A paraphrased restatement of the selected quotation was prepared and serves as a heading for each category within each sector.

SECTOR ONE

These teachers are nativists in that they believe that, within some normal range of environments, children are prepared for school by an evolutionary unfolding of abilities, largely outside the influence of parents and teachers. In addition, they do not believe that intervention in this process can be effective.

BELIEFS ABOUT DEVELOPMENT: "DEVELOPMENT IS A PHYSIOLOGICAL PROCESS SUCH THAT THE TIME WHEN A CHILD IS READY TO LEARN IS GOVERNED BY THE SAME MECHANISMS THAT GOVERN THE TIME WHEN HE BEGINS TO WALK. THE CHILD PASSES THROUGH FIXED DEVELOPMENTAL STAGES AT VARIABLE RATES. NOT ALL FIVE YEAR-OLDS ARE READY FOR KINDERGARTEN."

"Some children when they come to school are ready for the school situation so that they can be able to meet the school and with not a lot of stress....Other children are just not ready developmentally. And by that I mean they are not ready to let go of mom, they're not ready to take directions from another person, and I just feel like this is a developmental stage. And that every child will eventually go through the stages. But right now in kindergarten the first part of school is just really hard on a lot of little children....Some children crawl, walk, or talk early, or they have their teeth early or they cut their teeth late and there are early talkers and walkers and late talkers, and I think a lot of that tells us about developmental stages....All children develop at different--at their own rate of speed. And we cannot push that development. There is no way we can say, 'I want him to cut his teeth at a year old. I want him to walk.' Because you cannot make a child walk, because they're not ready. You cannot make a child talk. But in our school system right now, because a child is five years old, everybody assumes that that five year-old is ready developmentally to come and meet a school situation and what it has to offer. And I realy feel like that each child is an individual about how he is developing."

"If they are developmentally ready, I can teach them. They're ready to learn what I need to be teaching them. But if they're not, then often times I'm spinning my wheels with them."

"Beginning and ending sounds are a developmental process. When the children are ready, all of a sudden the light goes on. They all of a sudden can hear those beginning sounds and identify them. It's not something I can really teach them unless they're ready. Once that light goes on and they say, 'Oh, now I know what you mean.' All of a sudden they have the ability to isolate out that sound at the beginning of the word. It's a perceptual process, auditory perception."

"...too many children are coming to us with a chronological age of five, but they don't have the readiness socially, emotionally, and academically to get what is supposed to be taught. And if we get those and 'teach them' and they don't make it and we pass them on to first grade, they would not be ready."

"I feel that children do tasks when they are developmentally ready to do the task, and if you ask children to do the task sooner than they're ready, then it's frustrating and inappropriate....Some children should wait before beginning kindergarten. You can't meet the needs of the children that are extremely young developmentally. I feel it's a frustrating situation for them."

"It's like a clock within the body that's saying when you're ready you'll do it."

BELIEFS ABOUT RATE OF DEVELOPMENT: "SINCE DEVELOPMENT CONSTITUTES PHYSIOLOGICAL UNFOLDING, RATES OF DEVELOPMENT ARE SMOOTH, CONTINUOUS, WITH NO SPURTS OR DISCONTINUITIES; THE CHILD WHO IS SIX MONTHS BEHIND PEERS IN SEPTEMBER WILL BE SIX MONTHS BEHIND IN MAY."

"Parents frequently say, 'Well, I think they'll make a developmental spurt ahead.' And what I frequently say to parents is they will go ahead, but so will all the other children. And if the developmentally appropriate age according to the Gesell is five and a half, then if your child is scoring a four and a half, all the kids who are scoring at five and one half are going to be moving ahead and your child, too, but they're always going to be the tag end of the class."

"You do see improvement, but there's also improvement in other children, and they are showing us that they are really ready to go on. They want to do first grade work. But this child is still playing. And you see the young that comes through...but you see a lot of times at the end of the year, the child who is not quite ready for a school situation at the first of the year. By the end of the year, he is functioning about like the other children were when school began."

BELIEFS ABOUT EVIDENCE FOR CHILDREN'S LACK OF PREPARATION FOR SCHOOL: "IN MANY CASES YOU CAN TELL THE FIRST TIME YOU SEE THEM THAT THEY ARE NOT READY. THE GESELL PROVIDES SUPPORTING EVIDENCE FOR TEACHER OBSERVATION; TESTS PERMIT AN EARLY AND ACCURATE DETERMINATION OF READINESS."

"We might have a glimmer of it during that day [of Gesell screening] but we give them at least a month before we really even put it into words....The Gesell is something to physically give to a child and have the parents watch it and say, 'see, this is what we're saying.' Because parents a lot of times say, 'On no, it's just you, you're coming down too hard on my kid,' or whatever, and it's very hard for them to take a teacher's word that this is what you're seeing."

"Our screening starts, we do one screening in April, during the conference time. We pick up all the children who have not been screened when school starts. We have different criterion [levels] When we test them in April, they must be a really strong 4.5 year old [Developmental age]. When we test them in September, we want them to be a pretty strong 5 year old. We take in that different time. And right then is when we'll make a recommendation [for the two-year program], and it doesn't take long. You can almost tell when a child comes in and sits down in a chair where this is going to end up. Because one that cannot get away from his parents...cannot sit in that seat without constantly going back to the parents, that can be an indication, not necessarily, but it can be an indication. Or a child who, the first thing they're asked to do is build a series of things with ten cubes. The child who cannot sustain to working with those cubes, you figure they might be developmentally young."

"[The best evidence] is the Gesell screening. We do go strictly by that. We need something to back us up. We may have a gut feeling when that child falls off his chair 33 times, but it [the feeling] isn't going to work."

BELIEFS ABOUT THE POSSIBILITY OF CATCHING UP: "THERE IS LITTLE LIKELIHOOD THAT A CHILD WHO IS DEVELOPMENTALLY BEHIND HIS AGE MATES WOULD CLOSE THE GAP THAT SEPARATES THEM."

"Isn't that logical? You start them at five, and the way they themselves are acting and thinking and developing. No they don't ever [catch up]. You are what you are."

"You want to. You try [to close the gap], and there are some that close that gap because after you've had them for three or four months you see that they're beginning to function, and they're beginning to move along and follow directions and they've really gotten in good with the classroom procedures. They're smart children, and they learn quickly to take a clue from another child or it's such a routine that they are in the routine. [But] lots of times you try something new, and it

really throws them. And yet, you're still not working with them in the same way as you can with the children who are ready, because they've grown six months...but the other children were at that stage in September. So the thing that hurts me always is thinking this child is still going to be this way in first grade, possibly in second grade. Sometimes the gap is wider. They do start coming around in February in kindergarten. Then they don't start coming around until about April in first grade, and in second grade they may not come around at all....If a child is not really ready at five to handle kindergarten, are they going to be really ready at 16 to be responsible for a car and driving?"

"I always thought that children academically grew up in spurts. They may not know the alphabet today and two weeks from now they may know a whole bunch of it. But the Gesell people that train us say they never do catch up. The gap is never closed. If they are developmentally six months behind they will always be behind. If you gave them a year to catch up--many times you have a child graduate from high school and you're pushing college, and he starts college but drops out, lays out a year and starts the following year and will complete college--the Gesell people would say that is where he took his year to catch up."

"Some kids are going to be behind from the start, and if they aren't developmentally up to where they can use what's being taught in the class, then they're going to miss out on that. And then when they go in the next year if they go on to the next grade, they're behind from the start, and you can't expect them to start reading with the bunch when they don't have the beginning sounds because they weren't ready to learn them, and that kind of thing. I just think it gets to be a big snowball effect, and it's a real critical time to catch the kids and make sure that developmentally they're ready to start the whole progression so that they're not in the wrong place at the wrong time."

"Anything is possible. But I've found that the children that aren't ready in the beginning of the year, pretty predictably are not ready by the end."

"That is what has been proven, shown in a lot of the studies thay they've done. We can't catch them up, we as teachers or parents can't catch them up."

BELIEFS ABOUT THE POSSIBILITY OF INFLUENCING A CHILD'S PREPARATION FOR SCHOOL: "BECAUSE LEARNING IS GOVERNED PRIMARILY BY INTERNAL MECHANISMS, INTERVENTION IS LARGELY FUTILE WITH THE DEVELOPMENTALLY UNREADY CHILD. EXTRA HELP OR REMEDIATION CAUSES PRESSURE, FRUSTRATION, AND COMPENSATION; THE TEACHER CANNOT INFLUENCE PSYCHOMOTOR ABILITIES, ABILITY TO ATTEND, SOCIAL MATURITY AND THE LIKE."

"The readiness skills that you teach, you have to just hope that he can catch up to where he needs to be for himself. I don't think that there's anything you can do. It's when his

body's ready, and he's ready to sit, to listen, and so on. It'll be there. But you can't push it, because that comes back down to the child himself."

"As long as they're not pressured into learning something they're not ready to learn. If they're not ready, I'm not going to push them, because that is pushing them out the door, as far as I'm concerned. I have a little boy and he's very young. His speech is very developmental. He's still like a four year-old. He's not ready to write. His fine motor is just scribble. That is the stage that he's at. And I'm not going to even try and get him to write, if he's not ready. If he's still in scribbling stage, why should I take the joy out of his scribbling stage and make him do something he's totally off base for? I don't believe in that at all."

"No matter what you do, you can't get that child ready. You have to wait for them to get ready themselves."

"It's all within the child. Which is really hard, because we as teachers always think, 'well if they're not doing this, we can always do this to remedy it.' Or we can always do this and this will help them. And I don't believe that's true. I think that we run into problems later on. We might be able to do it for the first year, but I think the problems will be there whether in second grade, third grade, fourth grade....They will compensate for it by being the class clown or later developing an attitude of 'oh, I don't care.' Or overachieving, trying and trying as hard as they can and being under that pressure a lot."

"The parent said that she would catch him up over the summer, and that she would send him to summer school or something. And that way felt that she would get him caught up for first grade. I told her that I personally don't feel that you can do that. I don't think that it's a matter of giving him more things for him to know. That's not the issue. The issue is for him to grow himself, the maturity. I guess I have a hard time understanding a kindergartener going to summer school for remediation almost. Because I think that's really, really hard on their self-concept. I think it's easier to come and to do a year of kindergarten again where they know that they're going to be achieving and successful, versus a summer school that seems like a remediation technique to me. And that's real early to be starting with that."

"You can't teach readiness."

"I don't think I could induce a spurt. I cannot make that child sit."

BELIEFS ABOUT THE CAUSES OF LACK OF PREPARATION: "CHILDREN ARE NOT READY BECAUSE OF LOW DEVELOPMENTAL AGE, CHRONOLOGICAL AGE, SEX, NOT IQ, SOME SMALL EMPHASIS ON PRESCHOOL AND ENVIRONMENT."

"I think the hardest thing for parents to understand about

developmental is that it isn't anything they have done. Parents think, 'well, if I had taken him more places....' It has nothing to do with that. It's like a little time clock inside. When the time clock goes off and it's time then you will do it. You can't push them. You couldn't have stayed home with them or read to them four hours every night. None of those things will do anything."

"We can't tell if they have been to pre-school. If I don't look at the records, I couldn't pick that out."

"Chronological age makes a difference. The younger kids can't maintain their attention span. Some of them were premature babies. Some walked late."

"It takes very skillful dealing with parents to help them understand that their child could be very bright but still not be ready to be in a kindergarten setting, which is determined by developmental readiness. I think parents frequently cite differences between their children and very typically the boys tend to be slower. It's recognized that at kindergarten entrance boys are about six months behind girls. And I think parents see these differences in their own children. The boys perhaps or another sibling walks slower or talks slower or shows an interest in books later than the other sibling. And it's not that the parent is necessarily parenting the two children differently."

"It's just their own little time table."

"I just tend to really look hard when I see a young birth date in general."

BELIEFS ABOUT WHAT THE TEACHER CAN DO: **"TEACHERS CAN PROVIDE CHILDREN WITH MORE TIME TO MATURE; PLACE CHILDREN IN DEVELOPMENTAL KINDERGARTEN, PRESCHOOL, SEND HIM HOME ANOTHER YEAR, PLACE IN SLOW GROUP IN CLASS, REDUCE INSTRUCTION BELOW FRUSTRATION LEVEL, LOWER EXPECTATIONS, BOOST SELF-CONCEPT, USE MANIPULATIVES TO TEACH CONCEPTS AT THE PSYCHOMOTOR DEVELOPMENTAL STAGE, THEN RETAIN THEM IN KINDERGARTEN OR PLACE THEM IN TRANSITION ROOM; PROVIDING ACADEMIC ASSISTANCE IS IRRELEVANT AND HARMFUL."**

"You don't expect him to sit for very long, so you do very short, snappy things for him. He's usually not the only one who can use these kind of things. You give a little bit of allowance to him....Do a lot of praise, a lot of manipulatives, and a lot of small group situation. Not so much paper work."

"If they are developmentally young, let them have a year, a gift of a year, a gift to love their school, do things that they can do and do well and have a curriculum where it's stimulating, where they're happy, where they're learning, and they can grow. 'Just give me some time. I can't do it any faster. And I won't ever catch up, so don't try to force me.'"

"One child I had in kindergarten last year was an extremely successful student. The parents had voluntarily held her out the year before because they had had an older daughter that had started when she was chronologically young and had had a lot of difficulties, and so they just decided to wait a year and give her that advantage, and she was a terrifically successful student and real leader in the classroom. And I cite that example to parents who are debating the issue or who are considering waiting, that it really can make all the difference in the world to start your child a year later."

"I tend to have a fairly high number of children repeat kindergarten for developmental reasons. Last year we had five out of a class of 24, and we had asked two children prior to starting school to wait (for another year) to start school because of extremely low Gesell scores and inappropriate behavior in the classroom."

"Usually you have maybe a little group that is developmentally on that same level....And I would give them a lot more manipulatives than I would give the other children. Instead of doing addition and subtraction readiness like some of the more mature children, they need to be working with numbers through cubes, rods and a lot of stuff like that. They need a lot more time. I would just try to make the curriculum workable for them. I wouldn't want them to feel a lot of tension and a lot of stress. I wouldn't want them to feel that already in kindergarten, they're a failure."

"Two boys I recommended were to be held back last year to repeat kindergarten. The one who repeated is doing really well, able to cope a lot better. Like finishing his work. And he's at the top of his class, where he was at the bottom last year."

"Developmentally less than five? I would like to see them in developmental kindergarten. I would not like to see them in the regular kindergarten program."

"He's young. He's a boy and very low in a lot of those areas like following directions, attending, and things like that. I just feel he needs another year to get him ready for first grade. Just to give him a big start. If he doesn't, school's going to be a struggle for him....If he's struggling right now in kindergarten what will it ever be like in first or second grade? When I present that to parents I just say they need another year just to grow. that they need a catch-up time, that there's all these things that we're presenting in kindergarten and they're not ready to do them. Then if the parents agree, we take the pressure off, probably by giving him different expectations than I will give the other kids. When we start to do handwriting on lined paper, I will give him just a one-line so that I will expect him to at least get his letters to land on one line, rather than trying to fit in the lower case letters on the dotted line. If it's a coloring page and I might have him just color part of it or accept some parts of it that he's colored that

that's the best that he can do. Then I will accept that. With the other kids, I would make them go back and do it over if they didn't do it right."

"When I give out a worksheet, with him we may do two little parts of that worksheet and then I have him hand it in and he gets the stars. The parents know not to make him finish it at home. He's done what he is developmentally ready to do. There's no pressure on that little boy."

"Children are grouped in their reading readiness skills. Children who know all the letters and are starting on the beginning sounds are in one group and children who still need practice on the letters are in another group. This particular child [who was developmentally younger], I would put into the lower group even though he knows the letters because my lower group would go at a lot slower pace."

"We have one group where the parents have agreed that their child will have a two-year program (based on the Gesell screening) and then we always have a few in the other groups who were identified as being developmentally young but whose parents felt that they should go ahead into a regular program, and that's the parent's decision....(For the latter group), I individualize the best I can in my regular program. The one thing that I cannot individualize is that shorter attention span. And often times those are the children who then end up developing bad work habits."

"We find that with the younger children, we give them manipulatives, sand and water table for instance. Perhaps a sit-down activity. By grouping the children we are able to gear our academics--more paper and pencil work for those that are ready for it and their fine motor is developed enough to handle it; and more manipulatives and large motor activities for those younger children who are more movement oriented. If a child cannot keep up, cannot handle the situation then we move him into a group which is more appropriate to what that child can handle."

"I'm worried about parents thinking they can push them ahead by working with them. It's probably because the child isn't ready. If they're not getting it from what we're teaching and working with them here, it's probably because they're not ready to do it; and all this work is going to frustrate parents terribly and it's not going to really help the child a lot and it may frustrate her terribly."

<u>BELIEFS ABOUT ENDPOINTS OF KINDERGARTEN:</u> "BY THE END OF KINDERGARTEN, ALMOST ALL CHILDREN SHOULD MEET A COMMON STANDARD."

"I think when children go into first grade they all need to go in on an equal footing and that's what I understand a developmental kindergarten is all about. It takes some of these younger children who do not have fine motor skills or who do not

have the ability to sit in one spot or to concentrate, who have very short attention spans, give them an extra year so when they hit first grade all of them then are going to start into the reading. All of them are going in on about the same footing."

"[The first grade teachers] would not able to teach the reading from the curriculum if our children didn't learn the alphabet and the sounds and didn't learn the numbers and didn't learn how to approach sitting down and writing and holding the pencil and doing these kinds of things, they would not be able to go on with their curriculum because they would have to teach the readiness first and then teach the curriculum."

BELIEFS ABOUT FIRST GRADE: "FIRST GRADE IS STRUCTURED, TEACHER-DIRECTED, WORK-BOOK ORIENTED; TEACHERS SEND POORLY PREPARED PUPILS BACK TO KINDERGARTEN AND DO NOT MAKE MUCH PROVISION FOR INDIVIDUAL DIFFERENCES."

"Knowing the first grade teachers, I know that their program tends to be very high geared. Children that cannot sit and work quietly, that are not pretty independent and I would say probably that are not ready to read, are children sometimes that tend to flounder in the first grade in reading."

"It even got so bad that at the end of the year I wanted him definitely to have two years [for kindergarten] because they would really slaughter him in first grade. I could see him never getting to have recess or noon. He'd be sitting in him room doing his papers."

"The first grade teacher and I have a good working relationship, and she said, 'The class you sent on was really on target, they were all ready.' Two children were sent back to kindergarten from the first grade this year and both of them had transferred from other schools. In other words, she felt they were not developmentally ready to be in first grade."

"They expect a child to be able to sit down and concentrate and complete a task. To be able to write and to know their beginning sounds, coming into first grade. They start out with reading sight words and blends. And depending on the child's ability, of course, that's the ideal that they come in with their beginning sounds, and I know that some of the kids that I sent on last year, I talked to the first grade teachers now and they say 'So and so doesn't really have that down yet.' And in a couple of cases the first grade teachers have tried to send kids back to kindergarten."

"Well I try to think of the child and see how he is and think of him in a first grade class where he has to have a lot more thrown at him, where a lot more is expected of him than there is in kindergarten. And if you look at him in kindergarten and he's having trouble attending. I try to think of him in terms of first grade, and how it would be to put that child in a first grade class. And I just feel sorry for him, as if it would

be truly cruel. That child shouldn't be in first grade yet."

"There is a lot more expected of them, and I'm afraid they would begin to see, whereas maybe these children don't even by the end of the year realize that they're behind, as you might say, in kindergarten, but they will realize when they get in first grade and others go ahead, and they don't, they'll begin to see themselves as being different and not being able to do things, and as being dumb."

"The children need to know at least three quarters of the alphabet, because if they don't, they're going to sink in first grade. First grade is very demanding, in my opinion."

BELIEFS ABOUT HOW TO DEAL WITH HETEROGENEITY: "KINDERGARTEN IS STRATIFIED AND COMPETITIVE; CHILDREN FEEL BAD ABOUT THEMSELVES IF THEIR WORK IS NOT AS GOOD AS OTHERS'; GROUPS SHOULD BE HOMOGENEOUS."

"It always comes back to peer pressure. There is less peer pressure [in a developmental kindergarten as opposed to a regular kindergarten. In regular kindergarten] I don't think he can catch up to the kids, they've done quite a bit of our reading and math, and he is back on day one with a lot of that stuff. He's showing signs of frustration, and knowing he's not doing as well. Because he's always the last one to finish. He's always the one who needs me to repeat the directions. So he knows the other kids are seeing it. I think he knows he is behind."

"These children are extremely sensitive....They know. They know when they're doing well and when they're just doing so-so and when they're doing poorly. They know it. They know when you like them, they know it from the look on your face how they're doing. They know."

"I guess one main thing that really bothers me is that concept of himself. 'How come this person can do this and I can't?' I've been in a situation where people knew what was going on and I didn't. I was overplaced in a computer class, and these people knew what they were doing and I didn't. And I could not do it. and I felt very, very bad....These little guys, they can't understand why they can't do that coloring that that other person is doing....I don't know how in the world they could keep up. And a lot of them you can tell they quit doing it. It's just a self-concept to me that is very important, and when you see little sad faces, to me, it just really makes me sad. So I bend over backwards trying to make them happy. And it's very hard, you know, giving them things, not putting pressure on them, and yet, you know, it's going to happen to them next year. Because it's up to the parents whether or not they have another year in kindergarten....Here is where his peers are, and here he is, having a difficult time. It's going to be very hard on him."

"Over in Louisville they have pulled a lot of those really young kids together. It is much easier if they are at the same

level to teach a class like that than it is to provide all the differences from one end of the spectrum to the other."

"That is what we wanted to do with a two-year program. Why let a little child sit here in a one year program and have to meet the expectations. You start him off with knots in his stomach. That's not going to get any better when he goes into first, second, third grade. Why not let him have a tension-free year."

"We know this aged child and what he can handle. And if we see frustration, he won't come out and say, 'I'm frustrated, I can't keep up.' Their little faces show, 'Gosh, everybody else can do it.'"

"If you have a child that is younger and you put him or her into a group situation with children that are six or seven months older, then that probably will cause a friction....There is one school of thought that by mixing children, the five, six, and seven year-olds, the older child helps the younger child. And I think that does work to a certain degree. but you have to weigh that against being constantly helped by an older child--they say, 'Oh let me do this, you're too dumb to do it.' And then the self-concept comes into play."

SECTOR TWO

This small group of teachers is classified as nativists because they accord special emphasis to the internal psychological characteristics of the child and how these traits determine readiness for school. These characteristics are memory, auditory and visual perception, cognitive abilities, and social-emotional traits. It is believed that a deficiency of any one of these traits is responsible for poor performance in school and lack of readiness for school. But in contrast to Sector One, they believe that a defect in one of these traits is remediable by direct intervention; e.g., an auditory discrimination defect can be diagnosed and treated. After treatment, the child will be able to function more or less normally like his peers.

BELIEFS ABOUT DEVELOPMENT: "SPECIFIC ABILITIES EITHER DEVELOP NORMALLY OR THEY DEVELOP DYSFUNCTIONS; KINDERGARTEN-AGED CHILDREN CAN LEARN PROVIDED ONE OR MORE OF THESE ABILITIES IS NOT DISORDERED."

"The physiological and neuro-physiological types of development just take a certain period of time, the same way that a child learns to walk at different times. Also a child can develop those areas, such as auditory areas. Primarily in the gross motor, fine motor, and visual areas. Those flags. I think we have to be real careful in saying those perceptual areas are lags in development and we just have to wait it out. Because there probably is going to be a time for many of those children where they're going to have to have some retraining and some special help."

"You always have children who can handle everything else but have problems with visual motor coordination, and those children probably are going to have those problems so that wouldn't be any reason for retention. We have our learning lab, and children that are showing these problems work there....If a child absolutely couldn't listen, I'd certainly try very hard to find out what the problem is before wanting to keep him in kindergarten another year. The reason he can't attend may be because he has an auditory problem....If he has this block or a problem, then he's got to learn to work around that to compensate for it, and that's what we'll try to give him are ways to compensate."

BELIEFS ABOUT RATE OF DEVELOPMENT: "RATES OF DEVELOPMENT ARE UNEVEN AND UNPREDICTABLE; SPURTS AND DISCONTINUITIES CAN BE EXPECTED AS CAN REGRESSIONS IF THERE IS AN UNDERLYING DYSFUNCTION IN SOME SPECIFIC PSYCHOLOGICAL ABILITIES."

"I think that the kids have different rates. And I think some kids go more in spurts in terms of learning and other kids are more at a general level....I always look at the borderline child, the one that's the low average in what we're doing, the ones that have the spring spurts in growth and development, they may be going along here just plugging along in kindergarten and then all of a sudden we get to March and they just take off. And I'll say, 'Wow, this child's going to be terrific. There's no problem with this child. They're in a great growth spurt.' Well, what I've found over the years is that many times those children will go onto a plateau again. So when they hit first grade, they're at a plateau and then they don't make their next spurt until March or that year. And these children are passed on and on until third or fourth grade when the teacher says that this child just doesn't have it."

"Usually by the fall conferences (we bring up the subject of repeating kindergarten). What I tell the parents is that this child has been with us now for nine weeks and it may be possible that this child would benefit from another year in kindergarten.

We can't say for sure at that point because some children of course grow in spurts and maybe all of a sudden a child will take off."

"They do progress in a certain order, but they don't all do certain things this month and certain things the next month, and certain things the next month. They don't all follow a set pattern."

"Because of something like a delay in a perceptual area, some children just plain don't develop at the same rate as other children."

BELIEFS ABOUT EVIDENCE FOR CHILDREN'S LACK OF PREPARATION FOR SCHOOL: "THE BEST EVIDENCE IS MULTIFACTOR DIAGNOSIS OF SPECIFIC TRAITS AND ABILITIES, TESTS BY CLINICAL SPECIALISTS, SIMILAR TO SPECIAL EDUCATION STAFFING."

"The staff in the learning lab give them a complete evaluation in all the areas to know which ones to work on."

"A developmental profile is prepared so we have a definite profile of the child in all possible areas. We're looking for them having a solid developmental profile in all areas, without having holes or gaps in any particular developmental area such as an auditory area, a visual area, a motor area, or a language area."

BELIEFS ABOUT THE POSSIBILITY OF CATCHING UP: "IF DEFICITS IN ABILITIES CAN BE CORRECTED, THE CHILD CAN PROGRESS."

"The staff evaluates them and determines what they need to work on, then they go in for a few minutes before school each day and go through the stations that heve been assigned to them. They are reevaluated and as soon as they don't need it anymore they are dismissed from the program and resume in my class. It seems to work and the kids like it."

"Anything is possible."

"You have to approach it as if these are just gaps and areas that have to be filled in in order to make them a successful child in school."

BELIEFS ABOUT THE POSSIBILITY OF INFLUENCING A CHILD'S PREPARATION FOR SCHOOL: "DEFICITS CAN BE REMEDIED BY DIRECT INTERVENTION IN THE DISORDERED PSYCHOLOGICAL ABILITY."

"Getting them some resource room assistance, having things even within the classroom that help them within the development of those particular lagging areas so even within your own curriculum you can do it. If it's a speech or language problem by having the speech and language help. It would depend upon what the problem is. If it's a visual-memory problem, then you

just give them lots of tasks and lots of cues on, 'did you notice this?' and 'If you look carefully I think you can see a difference in this.' So you give them clues on how they can cope with an area of weakness, as well as you give them lots of tasks so they can practice and get accustomed to those kinds of things. Try to build up areas. For speech, it would be with a speech therapist, being able to work on language development and syntax and vocabulary, those kinds of things."

"Sometimes you just have to wait on Mother Nature to help the child....Often times you expose the child to what you have and just let him try and do his best....Others are screened in learning lab and get a lot of remediation in the areas of gross motor, visual perception, memory or conceptual....I feel that a lot of these children that are there have not had the background in a lot of these things. For instance, several of these children, the parents told me at conference time, 'I've never taught him anything because I thought that was to wait for kindergarten.' He never had a scissors in his hand. And I think that some of these children need to have that exposure. Now, on the other hand, if you have a very young child and try to theach them to hold the pencil before they're ready and to do a lot of that kind of work, you can damage those little muscles....They try really hard in learning lab to use a lot of manipulative things and a lot of language experiences. So I think it's a good program. I know there are those pros and cons [about intervention] but I really feel that if those children are going to be here at school then we need to give them all the opportunity that we can to catch up at the beginning of the year. And some do."

BELIEFS ABOUT CAUSES OF LACK OF PREPARATION: "CHILDREN ARE NOT READY BECAUSE OF LACK OF BACKGROUND EXPERIENCES, FAMILY STABILITY, FAMILY INHERITANCE OF SPECIAL ABILITIES, WITHIN NORMAL RANGE OF DEVELOPMENT."

"Sometimes it's just growth. They may be very young. They may not have had any experiential background in writing and coloring and that kind of thing. They may have a coordination problem--a midline problem that could be neurological, some of it may be caused by a birth defect....It's exciting to know that children behave the way they do because there's a reason, and it's kind of our responsibility to find out why that is."

"I think a child can have an extremely troubled happening in their life. They can have a trauma that can cause them to emotionally not grow. And from the emotionally not growing for a period of time, they don't grow in other ways. They don't grow developmentally in other ways."

"She's from a split home and she has two sisters that live in California. Her mother works all the time, but tries really hard and tries to get her with a good sitter. And the sitter she has provides her with some experiences but she seems to want more attention, and in wanting more attention, very often will do

the opposite of what she knows she should do."

BELIEFS ABOUT WHAT THE TEACHER CAN DO: "THE TEACHER CAN IDENTIFY PROBLEM AREA OR REFER FOR PROFESSIONAL EVALUATION, BUILD UP OR WORK AROUND THE PROBLEM AREA; ADAPT INSTRUCTION; PROVIDED ACADEMIC ASSISTANCE AIMED AT CORRECTING THE DISORDERD ABILITY."

"When I was first teaching in Boulder and first teaching kindergarten I was hearing lots of teachers who would say, 'Well, if a child isn't ready, then they should stay home for that year.' But I quickly left that philosophy and drew upon my own which said the first year of kindergarten is a valuable year, and we can do things in order to let that child adapt to the curriculum that we're teaching so that they feel comfortable, they still love school, they still are succeeding, and that by being here I can form a direction for them that even though some of them have two years in kindergarten, I have given them a good direction to go."

"I just pursue the year and work on everything that I consider important for kindergarten. And I do that with all of them, whether they are the very low end or whether they are the high end. I pursue the kindergarten curriculum, I try to have as much in terms of accepting what they can do with it and not being critical if they are borderline in terms of, say, their sounds. If they're borderline in terms of their sounds, I know that that borderline child needs to have more practice and more time and more auditory training in order to hear sounds. That child might also need other techniques in decoding words and giving them experiences in that. But mainly I just pursue the curriculum and I try to adapt it in terms of the skill level of each child and the ability of each child so that they feel a success. And then we just see where things are in the spring."

"We might not move through the readiness book as quickly. In terms of day to day work, I would expect that child to do exactly what all the rest of us are doing and to the very best of his ability."

"They go to learning lab for 15 minutes before they come to class. They work a lot on a one-to-one basis there, a lot of repeating, listening, playing games, sharing conceptual kinds of things."

"I have a rule in my class that I only give directions once, then I go over all the directions, model them, show them what we need to do. I have the child repeat the directions back to me and then I go over them again. If they forget then they can ask a friend. So they're beginning to develp some pretty good listening skills."

"Try to give them the help that they show they need. We have parent volunteers working one-to-one. I give them lots of individual help. I don't expect them to finish everything. I use manipulatives instead of workbook pages. I would take the

pressure off, but I wouldn't give them what you'd consider more play time, although they might think they're playing, but what you give them are things that they can play with but have an educational purpose."

BELIEFS ABOUT THE ENDPOINTS OF KINDERGARTEN: "MOST READINESS SKILLS SHOULD BE MASTERED SO THAT FIRST GRADE PHONICS PROGRAM CAN COMMENCE; DIFFERENCES IN PREPARATION ARE EXPECTED TO BE ACCOMMODATED BY FIRST GRADE TEACHERS OR SPECIAL EDUCATION."

"[The first grade teachers] want them ready to take off reading. They don't want to spend very much time with reading readiness...Within three weeks the child can be reading. But they want them to have an extremely solid reading readiness and math readiness background. Just a solid, solid base. That's what they want and that's what they like, it makes it easier when they start in with their curriculum."

"The first month, I think, for first grade children would be very difficult, a very difficult adjustment. Because they do bring them right in, give them a chair, and start giving the work those first few weeks. But somehow they seem to, in spite of it, seem to make it, at least the children who are ready. The children that are not ready sometimes....Sometimes they do refer them after the first six weeks back to kindergarten. I somewhat feel that we have to take those children where they are and not worry so much about a particular program that we have set up. And I feel that if we have to do that, then in some way the rest of the grades have to do that, take in the children where they are and working with that child. Now I know not every child can be dealt with on an individual basis, it's just an impossibility with large classes. But I do think that if a child is ready in every other way for kindergarten, other than just not knowing all their sounds, then I think the first grade teacher will also have to compromise somewhat in reaching that child where he is in that grade and helping him....We have children coming in from other areas, from other schools, and yes, it's impossible to have all the children in the same level at the same time. It never has been and probably never will be. And we certainly have to learn to reach the children at the top and at the bottom. And it's not an easy task."

"According to the curriculum guides, kindergarteners don't 'master' anything., but there are certain things you expect."

BELIEFS ABOUT FIRST GRADE: "FIRST GRADE IS STRUCTURED AND DEMANDING, BUT TEACHERS TOLERANT OF INDIVIDUAL DIFFERENCES; CHILDREN WITH NEEDS ARE REFERRED FOR SPECIAL EDUCATION".

"The classes are large. They work at a desk or table very much independently. They're not going to have the opportunity to do play-oriented things. They don't have the materials or the space or the environment to do it. It's more paper and pencil. It's very programmed in there. The teachers cope with (the poorly prepared first grader) as best they can. Children get

referred to special education fairly quickly, or to some other special program for services."

BELIEFS ABOUT HOW TO DEAL WITH HETEROGENEITY: "TEACHERS SHOULD REFER FOR SPECIAL SERVICES; PROVIDE INDIVIDUAL ATTENTION; PROMOTE WORK ETHIC; COOPERATIVE LEARNING PROMOTED BY TEACHER."

"Many children are assigned to learning lab. They love it. There is no stigma to going there.'

"Give them more individual help. Help them finish so they don't feel defeated. Try to give them the types of things that they show they need....Sometimes we'll give the parents things to do at home, not 'school work', paper and pencil things but manipulative fun type of things. I developed along with our screening lists of activites a set of activities for auditory discrimination, visual discrimination, fine motor, language development...."

"[Instead of homogeneous groups] I would rather have a mixed group, because I think it's good for children to see all different types. It's good for everyone to know that not everyone is the same. We really work hard on getting the children to realize that everyone has things that they can do well and everyone has things that they have problems with. And I think that if a child is in a group all the time, that moves just at his speed, that child isn't going to realize that there are differences in people. I don't feel that at this age anyway, that it hurts, that a child is going to say well, I'm dumb, I can't do anything as well as so and so. At least we certainly work hard to prevent that....When my children are working on a project, I know the ones that I'm going to have to make sure I get to and help, but I also get to a lot of others, because I don't want those children singled out, to feel that the teacher always has to come and help me. That's one way you can prevent them from getting a poor self-concept."

SECTOR THREE

The small group of teachers in this group can be described as (perhaps incidental or unknowing) adherents of the philosophy of John Dewey. They believe in a complex pattern of interactions between the psychological nature of the child and the environments provided by caregivers. The environment and materials are arranged by the teacher based on an on-going study of each child and what interests of his might awaken his process of learning. These teachers believe that the social

configuration of the classroom makes a difference in how children develop and learn. Children learn from one another. They believe in expectancy theories that children can take on the characteristics that teachers and parents ascribe to them.

BELIEFS ABOUT DEVELOPMENT: "CHILDREN GO THROUGH NATURAL STAGES, BUT THE PROGRESSION IS INFLUENCED BY PARENTS AND TEACHERS. TEACHERS CAN INFLUENCE THE CHILD'S ABILITY TO FOCUS, INTERNALIZE CONTROLS, AND GAIN INTEREST IN OTHERS."

"There is nothing magical about five years old or six years old and where the kids should be."

"Maturity is the ability to focus and whether you can do it or not. And to have their bodies working effectively for them or not. When those things aren't in place, you have an immature child. The teacher can (influence their ability to made choices). The teacher can really help, even the immature child, they need more in terms of your time and effort and they need the environment to be set up in such a way that it's not confusing for them. And they need proper choices, not too many choices, but I think the teacher really can affect that and work with the child during the year so that those kinds of things are helped along. We can't get inside of the child and rearrange things. But I think there are some things we can do in the child's environment."

"Physical development is something that is just related to time. The inner clock of the child. I think the teacher can help a child make contact--develop an inquiring mind, and to look outside, to look to others, and to become curious about what other children are doing."

"The child is a holistic learner, and because we're adults and see things in a linear way doesn't mean that kids see the world that way. A child becomes learning disabled or reading disabled **because** of instruction....I think we create our own failures because we don't understand the young child."

BELIEFS ABOUT RATE OF DEVELOPMENT: "WITHIN BROAD LIMITS OF CHRONOLOGICAL AGE, RATES OF DEVELOPMENT ARE NOT PREDICTABLE AND DISCONTINUITIES CAN OCCUR AS A RESULT OF QUALITY LEARNING EXPERIENCES; TAILORED TO THE CHILD'S INTERESTS."

"Kids are not predictable. You have to give them the benefit of the doubt."

BELIEFS ABOUT EVIDENCE FOR CHILDREN'S LACK OF PREPARATION FOR SCHOOL: THE TEACHER CAN OBSERVE CHILDREN'S USE OF THE ENVIRONMENT, MATERIALS, AND RELATIONSHIPS; ASSESSMENT OF READINESS NEEDS TO BE CONTEXT-DEPENDENT; TESTS PROVIDE ONLY A PARTIAL INDICATION."

"I don't think anything [like the Gesell] taken by itself can give you a good picture. It's like taking one test score for reading and saying this is where the kid is without observing that child in different settings, without talking to the child, without looking at the interaction between the child and the teacher. Watch him in class, watch how he interacts in a play situation, watch how he performs while the evaluator is giving the Gesell, watch how he picks up a book and handles the book."

BELIEFS ABOUT THE POSSIBILITY OF CATCHING UP: "YOU CANNOT PREDICT WHEN AND UNDER WHAT CIRCUMSTANCES A CHILD WILL PROGRESS."

"The ones who are behind can close the gap."

"Kids who learn to read really early and kids who learn to read in second grade, providing they're are not labeled as a failure, are the same when they get to fifth grade. The kids who learned to read early don't maintain that edge over the others."

BELIEFS ABOUT THE POSSIBILITY OF INFLUENCING A CHILD'S PREPARATION FOR SCHOOL: "THE TEACHER CAN MAKE A DIFFERENCE, THOUGH IT IS MORE DIFFICULT FOR LESS MATURE CHILDREN; LEARNING IS A COMPLEX INTERACTION BETWEEN THE CHILD'S ABILITIES AND INTERESTS AND THE OPPORTUNITIES PROVIDED BY THE TEACHER; THE TEACHER CAN INFLUENCE PSYCHOMOTOR DEVELOPMENT, ATTENTION, AND EMOTIONAL MATURITY."

"The number of opportunities we provide make a difference on the kids' listening and critical thinking and oral language and whatever. We give kids the opportunity to make decisions and live with the consequences and to problem solve. These opportunities make a difference in their social and emotional growth."

"You can't push kids beyond what they're able to do. You can provide models for them, you can set up the situation so they're exposed, but you can't force them. It's like Piaget's conservation tasks."

"The thing that I put most effort into develping in young children is that ability to be interested in others rather than in self."

"The teacher has to set up the kindergarten environment and curriculum to accomodate those children, those younger kids."

BELIEFS ABOUT THE CAUSE OF LACK OF PREPARATION: "COGNITIVE OR EMOTIONAL IMMATURITY, STRESS, LACK OF AVAILABILITY OF PARENTS, PRESCHOOL OR PRIOR ACADEMIC EXPERIENCE, INSTRUCTIONAL FAILURE, LOW EXPECTATIONS."

"The teacher that doesn't understand development."

"Chronological age explains some of it."

"...expectations, how parents and preschools have worked with the kids, what family and cultural expectations are."

"Not every boy lags, but many of them have areas that need more time. They have their own strengths, the boys do. It's just that sometimes classrooms value the girl's skills."

"It could be caused by lack of maturity, it could be caused by pre-school environment, where [anti-social behavior] was allowed to happen. Some kids are angry, not immature at all, but angry....There can be many causes."

"One never went to pre-school and had never used materials before. Pre-school, single-parent families, parent availability to read to kids, to provide economic kinds of things, parents having things as simple as paper and pencils around the house for kids to be able to explore with. Availability of age mates near the home. Developmental kinds of things too."

BELIEFS ABOUT WHAT THE TEACHER CAN DO: "THE TEACHER CAN ARRANGE THE ENVIRONMENT SO EVERY CHILD CAN BE SUCCESSFUL; STUDY THE CHILD TO SEE WHAT INTERESTS HIM; SET UP COOPERATIVE, PEER TEACHING; INDIVIDUALIZE INSTRUCTION; RETAIN ONLY IF FIRST GRADE TEACHERS ARE NOT LIKELY TO ACCOMODATE TO INDIVIDUAL DIFFERENCES."

"If they're going to be put in a situation where, because they are young developmentally and that teacher doesn't understand development and doesn't know how to take advantage of the differences in little kids as far as instruction is concerned, then I worry about the child. and then I might say, 'Well, in this situation, in this particular school, maybe we better give the child another year in kindergarten.' "

"Talk to them, that works well. Make sure that you organize the environment so that [the less mature children] are with more mature kids, for example, who can help them rather than put the two of them side by side. Structure activities so that they would not become discipline problems, give them things that their attention could handle. Make sure that when you structure the activity that you've got sitting down activities and a movement activity so that you're not sitting down the whole time. Things like that."

"That's why I believe in experiential education,because with that variety of materials, the child will plug in right where

it's comfortable. And you can see right away by the way the child works with materials the kinds of experiences he is going to need that year....Every child can be successful in this classroom, because of the range of materials, and I'm not sure that's true of a very paper-oriented, teacher-directed kindergarten when each child is making the same clown face or cat. When there is a wide range of kids, you've got to offer them a wide range of experiences."

BELIEFS ABOUT THE ENDPOINTS OF KINDERGARTEN: "THERE ARE MULTIPLE STANDARDS AND MULTIPLE WAYS OF ACHIEVING THEM; CHILDREN COME INTO KINDERGARTEN VARIABLE AND THEY LEAVE VARIABLE; THAT VARIABILITY IS NOT THE SAME AS FAILURE."

"Retention is not something that is used that much, at least in my perception because the expectations [for exit standards] are not that stringent."

"The whole feeling in this program is that because [primary education] is a process, they would still be passed along because of the ability of teachers to make those kinds of adjustments and to move them along in those other areas and perhaps give them more opportunity to develop."

"A child who was passed on to first grade by us last year moved to another school. This fall the principal called to tell me that the child had been placed in kindergarten instead of first grade. I concurred with his estimation. The expectations at that school were certainly more, they were greater for a child entering first grade there than here as far as needing a certain product from kindergarten in order to make the grade at first grade. The principal was adamant that first grade **was for** reading. Here we have kids that may not read until second grade."

BELIEFS ABOUT FIRST GRADE: "FIRST GRADE TEACHERS DIFFER IN THEIR DEGREE OF FLEXIBILITY AND ABILITY TO ACCOMMODATE LEARNER DIFFERENCES."

"[The teachers I feel good about passing a marginal child along to] are flexible, they would recognize the whole child rather than just the academics. They're able to recognize that, for example, a child who is highly kinesthetic in their learning mode, that's a kid that pretty much doesn't learn visually. Kids who are real visual, they get reinforced and usually they do very well. But a highly kinesthetic child doesn't. (Other teachers) are not able to take advantage of that learning style by using creative dramatics, by using movement in the classroom to help that child learn. They've got pretty much a tunnel in terms of how kids ought to learn. They don't provide for those differences. When teachers call in a consultant to do an assessment of reading ability aren't interested in finding out how to adjust their instruction for a child, they are interested in finding some kind of learning disability so they could get that kid out of their classroom into special education. And I

would look at the child and say he's not special education material, but what really needs to happen here is that teacher needs to adjust his or her instructional techniques."

"I don't know why teachers are concerned about accountability and test scores. Some of it comes from the principal. Some look at learning as having to be very hard on people. There are other principals that look at a child first and then make decisions based on child development. There are some schools where teachers are real uptight and others where teachers are experimenters. There is an overemphasis on test scores and principals don't really know what test scores and grade equivalents mean. They quote test scores to teachers and then the teachers teach to the test, teach isolated skills. That is what is tested, so that is what is taught."

"In this school I visit the first grade and consider whether it's an experiential or traditional classtoom, the personality of the teachers and how that teacher uses materials. I think the mode (traditional or experiential) that is stressed would be really important for me to know when I thought about whether I was going to pass that child on or not. If the child was going to sit at a desk and do lots and lots of work sheets and workbook pages, I think I might tend to keep a slightly immature child another year."

BELIEFS ABOUT HOW TO DEAL WITH HETEROGENEITY: "TEACHERS CAN CONSTRUCT A COOPERATIVE LEARNING ENVIRONMENT WHERE CHILDREN LEARN FROM EACH OTHER; CLASS IS COMPETITIVE ONLY IF THE TEACHER MAKES IT SO; INDIVIDUAL DIFFERENCES ARE INFINITE AND SHOULD BE CELEBRATED; HOMOGENEOUS GROUPING HELPS TEACHERS NOT PUPILS."

"I have seen the situation where kids are grouped in high, medium, and low groups from the time they're in kindergarten. And what is the school telling the child? 'You are not capable.' And that child thinks that they aren't capable. That's one way that schools handle differences. On the other hand, if a teacher is able to take advantage of that heterogeneous group, they would find that there is an awful lot of peer teaching going on. And those kids that are less mature, less aware, if I kept them all together, they wouldn't have the benefit of their peers as far as teaching them. And then they start labeling themselves because I've labeled them as being less capable. (They can become dependent) but that would be because of the way the teacher handled it....Dividing kids into a high, middle, and low group is easy. It's an easy way to teach. And also they do it because teachers don't know how to take advantage of differences in little kids....I say to them, 'if you personalize your reading instruction, you don't have to worry about groups.' "

"It is important to have activities in a classroom that are not product-oriented. A classroom where there is such a wide range (of pupil abilities) should have a great many activites that are process-oriented, like sand and water and play dough, where you're just working with the material and exploring it

rather than making a final thing to take home and show mom and dad or to put up twenty-six cat faces or something like that. Because there are children, and the teacher needs to be really alert to this, there are children who do wonderful work in sand. And those children can be just as successful and just as proud and feel just as competent as the child who's using adding machine paper to write his numbers up to 677, which I have a child who is doing that. But sand and the water and the experimenting with food coloring, making play dough and working with that, clay, working with paints just experimenting with paint on paper, there really is no way to judge. But the techer can see how the child is working. It allows everybody to be confident, even those younger children. So the child who came in at four years and eleven months is in the bag. There are things that they can do that they can learn from. They don't have to sit there feeling like a miserable failure because they can't connect the dots or whatever....Every child should be able to fit in someplace. Even though it's harder with young kids. But we're going to be getting young kids. We're never going to get a completely homogeneous group."

SECTOR FOUR

The fourteen teachers in this group believe that children of legal age for kindergarten are ready for school and can be taught. Within the broad limits of natural maturation, what the teacher does influences the pupil's readiness and learning. The teachers practice instructional management (although they might not call it that), breaking the curriculum into segments and providing pupils with the opportunity to learn. Children who do not learn the material along with their peers are provided with additional opportunities by parents, volunteer tutors, academic assistance programs and the like. They differ from teachers in Sector Three who provide "alternative instructional content and methods" and those in Sector Two who provide "diagnostic-prescriptive correction of a deficit" in that these Sector Four teachers provide "more instruction."

BELIEFS ABOUT DEVELOPMENT: "WITHIN BROAD LIMITS OF CHRONOLOGICAL AGE, CHILDREN'S READINESS IS A FUNCTION OF THEIR EXPERIENCE AND LEARNING PROGRAM AND ENVIRONMENT."

"I agree that there's a certain point when they are ready, but I think they have to have developed certain skills before they are ready."

"My own child is not even two yet, and I believe that there are certain things that you can't teach him. You couldn't teach him sounds because he doesn't have the sounds himself. But I don't believe that a child just gets what he learns and slides by and learns as he goes. I think that there are things you can actually teach and expose to that they're going to gain."

"My interpretation of ready and your interpretation of ready are two different things. If they come in here and they can come in and sit down and they know how to raise their hand, and if they're halfway civil and know how to get away from screaming and yelling and are weaned from their mothers....Our school philosophy is that we take the children where they are that I can have many different children on many different levels, and that's fine. And that's one of the things we teach the parents, is that this child leveling off at sixth grade reading vocabulary and this child who does not know his or her letters are both okay. I am flexible."

"[Readiness] is an unfortunate term, because parents think it's something real specific that you can define or pinpoint. I feel uncomfortable with it....If they are five by September 30, they come to school. And you do the very best job you know how to do with each individual child."

"If you take an average group of six year-olds and an average group of five year olds, the six year-olds will be able to sit and do one thing longer. There is that. It is something that is a time kind of a factor. But the timeline differs so much child to child; it's not a five year, three month kind of thing. I'm sure a lot of it has to do with the experiences that children have had, and whether they're familiar with the kind of thing that you're doing."

BELIEFS ABOUT RATE OF DEVELOPMENT: "SINCE LEARNING AND DEVELOPMENT ARE POORLY UNDERSTOOD, THE TEACHER SHOULD EXPECT SPURTS, DISCONTINUITIES, AND REGRESSIONS IN RELATION TO OPPORTUNITIES TO LEARN."

"We might have concerns now [about need for retention, in November] but it's definitely not something that we would mark that child and say, 'We've taught four or five letters and this one hasn't retained any of those; he's definitely going to be back here next year.' You never say that because there usually is a spurt of growth after Christmas. They want to come in, they want to start reading, they want to start learning. And some

children can pick up five letters in a week, you just never know."

"Parents are our first teachers, they teach us an awful lot from one to five. Children whose parents don't help them, don't play games with them, all of the educational things that children generally learn at home. And then they're ready to move on to the more formal teaching in the kindergarten....And some parents just don't do that, and some parents are not able to give the children some of those three, four, five year-old skills because they just don't have those skills themselves. So those children come in and if they're able to learn, they learn very rapidly. But you have that first month where you can't tell whether they are children who can learn or can't learn or are slow learners or what. You have to give them time to adjust to the kind of atmosphere that we have here at school. And sometimes they just amaze you, that's why you have to keep your expectations up and say, 'Hey, forget that first impression you had,' and just go on and say, 'This is what children are going to do,' and do it as near for the individual as you can."

"All of a sudden the bell rings, and most of the sounds will come (as a result of working with a child). But it's getting that bell to ring....There are valleys and there are peaks, but once the child understands the letter-sound associations, they're not going to understand one letter, they're going to understand that there are a lot of other letters and these letters are connected to other sounds."

BELIEFS ABOUT EVIDENCE FOR CHILDREN'S LACK OF PREPARATION FOR SCHOOL: "TEACHERS RELY ON OBSERVATION THROUGHOUT THE YEAR, TO REVEAL LACK OF ACADEMIC PREPARATION AND SOCIAL MATURITY; FORMAL TESTS ARE VIEWED WITH CAUTION."

"[Any one source of evidence] can sway our perceptions so easily, so I'd hate to rely on any one source. If I was making the choice of one, the one I would want to rely on would be my own observations. If I've known the child for a whole year, I don't need to see a sample of his work because I've seen lots of it, and I know what he's able to do, how well he's able to attend, what his frustration level is. The Santa Clara is good for pinpointing areas of weakness. And you can almost teach to those areas. The Gesell test--I had one child that it was used on and I observed the administration and scoring and it concerned me, because it seemed to me that the scoring would depend a lot on the judgment of the person giving the test. There were quite a few scores on that particular one that were just real iffy....And some children test well and some children don't at all. And this particular child is extremely shy and withdrawn."

"The main part of it is my general feeling about testing young kids. I just feel that [even if the test] is validated beyond belief, to base a child's beginning or ending time in a school on a thirty or forty minute test doesn't seem reasonable to me, because it seems to me that there are so many other

factors that determine that. There are experiential factors, there are just all kinds of external factors besides that test. And I like having it available to use as an indicator, as a substantiator for whatever my opinions and recommendations are. I don't think that [the test] should be a child's first taste of school. I feel that children should come in and begin to learn to weave themselves into a unit, to learn what productive activity is here, to learn coping skills and to learn that this is a great place and they could be happy. Not to come immediately to a pressure kind of situation. And it matters not to me how kind the person is or how gentle they are with the child, generally that's the child's impression. And they feel tired about it. I also have a real problem with somebody coming to me and saying, 'Here's Johnny Jones, he's in this folder.' Because Johnny's not there. Johnny is a human being, unique and individual, and I want the opportunity to get to know him like that."

"I can't imagine giving a test to a child and saying, 'By this test, this is what I've decided to do with you,' or 'By this test, I can see that you're not going to make it in first grade.' There are just too many factors--immaturity, being able to get along with your friends, being able to expand your attention span, being able to complete a task....I just don't think that you can give the Gesell and say that's the way it's going to be....It's the 'in' test right now. And I'm not saying the Gesell test is bad. I'm just saying that someone would have to show me lots and lots of research supporting it. And if they did show me that, I would still have to have someone convince me that I could base everything on the results of this one test."

BELIEFS ABOUT THE POSSIBILITY OF CATCHING UP: "A CHILD WHO IS LESS PREPARED THAN HIS PEERS CAN CLOSE THE GAP, GIVEN THE RIGHT EDUCATIONAL AND ENVIRONMENTAL CIRCUMSTANCES; PARTICULARLY ACADEMIC ASSISTANCE IS REQUIRED."

"You can never tell when a child will take off and catch up."

"You have to realize that some of the children are going to move at a different rate than the others, and yet that doesn't mean that they aren't suddenly going to blossom or after a month or two in first grade they wouldn't really start moving any faster."

"You don't say in September, 'Oh, they can't do that.' [Because if you do], you keep them where they are. Because you don't know. And if you say that's all you expect of them, then that's all the further they will go. (Can they close the gap?) Not completely. But they can close enough of a gap. If you find out that (it's caused by) educational deprivation, they'll close the gap. If you find out that it's mental ability, they aren't going to close the gap."

BELIEFS ABOUT THE POSSIBILITY OF INFLUENCING A CHILD'S PREPARATION: "THE TEACHER CAN MAKE A DIFFERENCE AS CAN THE PARENT AND OTHER ASPECTS OF THE CHILD'S ENVIRONMENT; WITHIN A BROAD RANGE OF PUPIL ABILITIES, WHAT THE PUPIL LEARNS IS LARGELY A FUNCTION OF OPPORTUNITIES AND EXPERIENCES."

"They can be coached. They can be taught left to right and how to pay attention."

"We try everything we can, so that we don't give up on a child. I feel very strongly about that."

"Last year I had a boy who leveled out at the sixth grade reading vocabulary, but he had trouble writing his name. The first grade teachers are big time on the handwriting. I believe that that sort of coordination can be developed through the use of lots of little manipulatives like leggos, and things like that."

"We've taught several letters and several concepts in math, and children who just aren't getting it, you're concerned about and you push a little bit harder and you work with them a little bit more individually and you just watch them....Social and academics kind of go together. Socially I'm looking for whether they can get along with other children, share and play and handle a group situation. Once in a while you get a child that is probably doing just fantastic, is retaining everything you're teaching, is keeping up and expressing well but yet he's a loner and socially out of it. You're not concerned that he's not going to make it because academics are there. But you speak to the parents about how socially they need a little bit of help and recommend things like play groups, or try to overcome whatever it is that socially they're not dealing with."

"I think that some of these children are not as strong in some of those areas, but they have good work habits and they're mature socially and work very hard at it, that with a little extra boost in first grade can probably do all right. I've seen it happen."

BELIEFS ABOUT THE CAUSE OF LACK OF PREPARATION: "CHILDREN ARE NOT READY BECAUSE OF POOR INTELLECTUAL ABILITY, INATTENTIVE OR UNSKILLED PARENTS, PRIOR EDUCATIONAL AND ENRICHMENT EXPERIENCES, THE TEACHER OR EDUCATIONAL PROGRAM."

"[Two children with different levels of readiness] have a chemistry that is totally different, their environment may be different, their backgrounds, their upbringing, their genes, their level of intelligence. If you have two children in totally different environments, one who exposes their children to lots and lots of things and books and everything; and then you have the other child who just is existing, there's going to be the reason right there. They may have the same intelligence level but just not have been exposed to many things."

"The IQ of the parents and exposure--In this kindergarten I have children who spent last summer in Paris. I have children who are lucky if they get to go to Denver. If you are exposed to libraries and museums and the finest of everything you are going to pick up something....Also right now we have lots of parents that are working, and that't fine, because that's the economy and that's the way things are going to be. And children are now in daycare or preschools, and I think probably the biggest thing is exposure. Lots of working parents--it isn't the quantity of time that is important but the quality. I think reading to children every day is one of the things I harp on all the time."

"A lot of what makes school tick or not tick depends on the unique personality of the people involved."

"Though not all preschools stress socialization, most of them do--those children come in and they know how to communicate with other children. And the child who has not had any of that experience is really left on the outside and feels a lot of anxiety. That child also hasn't had the experience of attending to a teacher. Maybe their life has been a lot less structured than what we ask of them here during this two and a half hours. And so they have difficulty with socialization and with the academic tings, because they really haven't learned to attend when given directions."

"A lot of things come into play: family relationships, the makeup of the family and whether the child comes from a large family, is the first child or the last child, whether the parents had to work long hours and were not able to spend much time with their children, whether the children have ben able to play with others."

"He's more apt to be a subject of educational deprivation than lack of ability."

"It could be a very young child. It could be a child that never had to listen before. It could be a child that just didn't have a good night's sleep or a nutritious meal."

BELIEFS ABOUT WHAT THE TEACHER CAN DO: THE TEACHER CAN PROVIDE ADDITIONAL ACADEMIC HELP, ACCOMMODATE TO DIFFERENCES IN ACHIEVEMENT, HOLD HIGH EXPECTATIONS, REINFORCE AND TRAIN; WORK HARD AND ENCOURAGE THE PUPIL TO WORK HARD."

"We work, work, work with them."

"I would send the other children off to independent work, and I would keep that child in a group with me doing whatever work it was, probably the same work but I would be there and I might be doing what I call 'talking through it'....I would sit

there and say, 'Now put your finger on one, look at the pictures in the box with me. There is a cow, there are two sheep, here is one bird. Now you're going to find the sets that are there.' And I would just talk them right through it. And we would do the work together and he would get the pleasure of being successful. On their paper I would put a smiley face and a K next to it to indicate that it was done with teacher's help. And you go through that talk-through stage with children like that all the time because you don't know yet whether they're auditory, visual, or what kind of learner they are. So you hit all of them. And you are modeling at the same time. You have all those things, and you're going to hit something that helps them."

"Another thing that helps is teaching parents....I send home games to do that will help back up something that I see a child needs to work on. I will say, 'You need to do this, you need to take a ball and you need to practice ball skills with your child.' "

"You take them where they are. If they can't follow directions, then you give them one direction and you do little games and little activities and talking and have them repeat directions back, and work them through that. They probably never had to do it before."

"There's lots of things you can do to a child if they can't use small muscles or if they can't use their eyes and hands together. There are games and games for that. There are lots of things you can do if a child can't remember what they see."

"If you mark them now and tell the parents it's going to be a definite retention, I think you're asking for trouble. Because what if there is a spurt of growth? And sometimes you give up helping that child. I think that's wrong. I think we as educators have to give them the most benefit of the doubt or do something different and help that child. And maybe the way we taught it is not correct towards their learning pattern. Maybe we ought to change our style or drill or do something different and help that child. And I think if you marked them and said, 'If he doesn't get it now, he'll never get it. We'll try for another year of maturity, maybe he will get it next year,' I think you give up."

"We use parent volunteers, we use kids from Fairview, we use grandmas, we use truly anyone who volunteers. What it gets down to is just what is old-fashioned good. We do lots of super creative fun things with letters and sounds....We do all of these. And after a while, if you're creative and that doesn't work, and your workbook pages do not work, and your movies and filmstrips don't work, and then it gets down to getting the grandma or the Fairview volunteer to do some just plain old flashcards, it gets down to that. We try everything we can and we don't give up on a child."

"We see our main job as a teacher as watching children

develop through their play, that's the way they're developing intellectually. As different points arise in their play, when they are needing some communication skills--they're playing at the bean table and you say, 'I can see you have separated the small beans and the large beans.' That's more of an academic kind of intervention. Or if there are two children who want the same toy and you get down and say, 'I can see that you're feeling sad,' and having them tell me about what they see. And then you say, it's putting words in children's mouths but it's giving them some skills that don't just come naturally, 'Did you know that you can ask her if you can play with the toy when she is finished?' And at the beginning the child will sit there and not say anything. And you say, 'Would you like for me to say that for you?' And as the year progresses, the children then learn some of those skills, some of those phrases, and they see other children responding to them and so then the communication flows....Telling children letting them see how language can really make their world much more pleasant and giving them a feeling of control over what's happening to them. I definitely think that there are social skills that we all try to pick up along the way. Most children, when they receive enough reinforcement can pick them up rather quickly."

BELIEFS ABOUT THE ENDPOINTS OF KINDERGARTEN: "NOT ALL CHILDREN WILL BE AT THE SAME LEVEL, THOUGH MASTERY OF SKILLS IS A GOAL; FIRST GRADE TEACHERS SHOULD BE ABLE TO ACCOMMODATE DIVERSITY."

"Some [first grade] teachers are more willing to work individually, and they're more willing to use some unique methods of teaching. And other teachers are more structured and they teach all the children exactly the same way and expect everyone to start at the same place."

"We're doing a lot more than the curriculum requires. If you just looked at the curriculum guide, you could really sandwich that into just a small amount of time. You could almost run this like a preschool situation. And obviously we don't do that. But if the child had not mastered his letters and sounds (that is, going far beyond what the curriculum guide suggests) I wouldn't want him to go into first grade in this school anyway, because the majority of the children will be reading or ready to read by the time they start first grade. I really want children to have as many successes as possible and I wouldn't want to put a child in that situation."

BELIEFS ABOUT FIRST GRADE: "SOME FIRST GRADE TEACHERS ARE WILLING TO ACCOMODATE LEARNER DIFFERENCES."

"The bottom line? What is that. I'm not sure that we can reach that in a district that's as diverse as this. You may be 'ready for first grade with bottom line skills that you can check off' at one school and not even close at another school. Or you could be referred for K-1 at one school but be able to do perfectly well at another school. Usually when that happens, it is because the expectation level is different at the two

schools."

"And if a child goes out of here and we feel that he will have success in first grade then he can go out of here without knowing some letters and some sounds. We would like them to know all their letters and sounds when they go out of here. But there is generally a group that goes out of here who needs further help with those, and the first grade teachers are very comfortable about that. Our school's philosophy is that you take the child where you find them and move them to the extent of their abilities."

"First grade teachers never try to push a child back, they have never told us this child shouldn't have been here. They try to take them where they are, and if they're in third grade and reading at the first grade level, that's okay. You just have to adapt to that so the child grows with his own ability."

"Some first grade teachers look at the curriculum and they say, 'A child coming in here is supposed to know the alphabet, he's supposed to know how to make his or her name correctly for the school, is supposed to know eight Houghton-Mifflin words. They're supposed to know..." and they have this long list of things. And if the child doesn't know those things, they automatically say, 'That child does not belong here.' And then there are other first grade teachers who say, 'Now this is the curriculum and I know that, but this child has come in and this child is calm, quiet, is accepting of the program but he able to cope with the fact that he can't just do everything and is listening and learning, little details here and there, catching things from the curriculum. And I can say you're doing this work, you're in this group, you're doing this.' And that child can go along and be still very happy, not pressured and will probably repeat the year and still be very happy with school and have a good attitude because the teacher was accepting of those differences. And I guess that is what it comes down to. That you have to accept those differences even if it gives you a range that is terribly long."

BELIEFS ABOUT HOW TO DEAL WITH HETEROGENEITY: "HOMOGENEOUS INSTRUCTIONAL GROUPS, RETENTIONS, SEGREGATED CLASSES ARE NOT ALWAYS THE RIGHT ANSWER; IT IS THE TEACHER'S RESPONSIBILITY TO PROVIDE FOR DIFFERENCES WITHIN THE CLASSROOM."

"The ungraded is more of a real world kind of thing. Just as your heterogeneous grouping, instead of saying, 'We have all the high ones here,' or maybe sorting them out so we have all the six year-olds in this kindergarten and the five and a half year-olds in this one, and the fives in this on. I don't like that kind of grouping, it's not the real world. That just isn't the way we live."

"[About stratification and competition in the classroom], I think the competition comes about through the teacher, the person

who is leading a class can make it competitive or cooperative. The teacher can tone down the competition or make it more so. If one child feels bad about himself because his work isn't as good as the others, the teacher can readjust her schedule and do something to help that child. It's the teacher's responsibility."

"If you teach the class as a whole, the younger and less able children can learn from the others. I've never found that the bright ones are bored or feel held back by this."

"Some children come in here not knowing anything. Some kids come from a good preschool for maybe three years. The child who has his sounds, his letters, he's got an awful lot down. That child wouldn't be in the same group where Johnny who just came from home and has been with mom and just saw Sesame Street but didn't know his colors. They're at two different levels. So the child coming in knowing how to read will keep on reading. We will skip all the stuff that he knows. We'll reinforce it, but we're not going to go back and made him learn a square and a triangle if he already knows it. The child who doesn't know it gets the opportunity to learn it."

"I have never said to a parent, 'Hey, your child isn't cutting it, why don't you take him out at the end of nine weeks?' And I know that happens in some kindergartens in this district. And that is far more damaging to the child, to have started and to have somebody say, 'You're not making it, so go home.' Now I do have some parents who keep their five year-olds out....And another parent once said to me, 'What chance does my nice little average five year old have competing with kids like this?' And it is a fair question."

"Philosophically I have a problem with developmental kindergartens, the same philosophical problem I have with homogeneous groups....The labeling issue, I still think it exists."

"If I had a child that had just turned five, I'd probably have him stay home with me another year. Just because the trend is for children to be so much older when they go to kindergarten. And I want my children to start out feeling successful. But as a teacher, I think I had better look at it that every five year-old is ready for kindergarten, because that is what I'm here for. I'm here to provide for whoever comes in."

POLICY ISSUES RELATED TO DIVERSITY OF BELIEFS

Figure 4:2 is arranged so that the diversity of beliefs can be appreciated. There are sufficient grounds for arguing that

certain beliefs at opposite extremes in this display cannot simultaneously be true on logical grounds. For example, the belief that development occurs smoothly through stages governed by physiological mechanisms is logically inconsistent with the belief that development is the joint product of complex interactions between the child's characteristics and the opportunities provided by the teacher. More importantly, differences in belief have rather dramatic implications for what happens to children who fall under the jurisdiction of two different teachers who profess these beliefs (assuming some connection between beliefs and behavior). A teacher who believes that a child's poor performance or immature social behavior is due to his developmental stage is not likely to attempt to vary the environment or instruction so as to change that behavior or environment. A radical behaviorist (of whom none were found among those interviewed) might, inappropriately and without sympathy for developmental stages, force "direct instruction" on a very young child.

A child judged by whatever evidence and criteria to be behind where he should be would be treated quite differently depending on the school he attends--either by being given more time to grow naturally, given a diagnosis and prescription for his disordered ability, studied and educated in a unique way depending on his interests, or provided tutorials and additional academic instruction. These four alternative treatments no doubt have differential effects and costs. The implications of the diverse beliefs deserve further evaluation and discussion.

Is there a relationship between beliefs about development and the tendency to retain or assign a child to a two-year program? Figure 4:3 replaces the teacher code numbers first seen on the two-dimensional display in Figure 4:1 with retention rates associated with the teacher in question. For example, Teacher #15 in the upper right hand corner of Sector One in Figure 4:1 works at a school that had a kindergarten retention rate of 16 percent. In six cases, marked by asterisks, the school retention rates were replaced with the retention rates reported by the teacher. Three of these teachers were at a new school, and three others were new at their school and had appeared to bring different policies to these schools. A pattern of relationships is apparent in this figure, with a greater rate of retention characterisic of teachers in SECTOR ONE compared to SECTOR FOUR. This pattern suggests real relationships exist between beliefs and behavior.

There are also school effects evident in these data. If one were to draw figures connecting teachers who work in the same school, there would be only two cases where the figures would cross the horizontal line dividing interventionists from noninterventionists and two other cases where the figures would cross sectors. Teachers in the same building tend to share beliefs about child development and readiness. Whether this occurs by accident or because of one dominating personality or because of jointly felt administrative or community opinion cannot be determined from these data.

FIGURE 4.2

Summary of Beliefs about Major Issues for Distinct Subgroups of Teachers

CATEGORY OF BELIEFS	SECTOR ONE	SECTOR TWO	SECTOR THREE	SECTOR FOUR
BELIEFS ABOUT NATURE OF DEVELOPMENT	"DEVELOPMENT IS A PHYSIOLOGICAL PROCESS SUCH THAT THE TIME WHEN A CHILD IS READY TO LEARN IS GOVERNED BY THE SAME MECHANISMS THAT GOVERN THE TIME WHEN HE BEGINS TO WALK. THE CHILD GOES THROUGH FIXED DEVELOPMENTAL STAGES AT VARIABLE RATES. NOT ALL 5-YEAR-OLDS ARE READY FOR KINDERGARTEN."	"SPECIFIC ABILITIES EITHER DEVELOP NORMALLY OR DYSFUNCTIONS DEVELOP. KINDERGARTEN-AGED CHILDREN CAN LEARN PROVIDED ONE OR MORE OF THESE ABILITIES IS NOT DISORDERED."	"CHILDREN GO THROUGH NATURAL STAGES, BUT PROGESSION IS INFLUENCED BY PARENTS AND TEACHERS. TEACHERS CAN INFLUENCE THE CHILD'S ABILITY TO FOCUS, INTERNALIZE CONTROLS AND GAIN INTEREST IN OTHERS."	"WITHIN BROAD LIMITS OF CHRONOLOGICAL AGE, CHILDREN'S READINESS IS A FUNCTION OF THEIR EXPERIENCE, LEARNING PROGRAM, AND ENVIRONMENT."
BELIEFS ABOUT RATES OF DEVELOPMENT	"SINCE DEVELOPMENT CONSTITUTES PHYSIOLOGICAL UNFOLDING, RATES OF DEVELOPMENT ARE SMOOTH, CONTINUOUS WITH NO SPURTS OR DISCONTINUITIES. THE CHILD WHO IS SIX MONTHS BEHIND IN SEPT. WILL BE SIX MONTHS BEHIND IN JUNE."	"RATES OF DEVELOPMENT ARE UNEVEN AND UNPREDICTABLE; SPURTS, DISCONTINUITIES AND REGRESSIONS ARE TO BE EXPECTED IF THERE IS AN UNDERLYING DYSFUNCTION IN SOME SPECIFIC ABILITIES."	"WITHIN BROAD LIMITS OF CHRONOLOGICAL AGE, RATES ARE NOT PREDICTABLE AND DISCONTINUITIES CAN OCCUR AS A RESULT OF QUALITY LEARNING EXPERIENCES TAILORED TO CHILD'S INTERESTS."	"SINCE LEARNING AND DEVELOPMENT ARE POORLY UNDERSTOOD, THE TEACHER SHOULD EXPECT SPURTS, DISCONTINUITIES, AND REGRESSIONS RELATED TO OPPORTUNITIES TO LEARN."
BELIEFS ABOUT EVIDENCE FOR LACK OF PREPARATION	"IN MANY CASES YOU CAN TELL THE FIRST TIME YOU SEE THEM THAT THEY ARE NOT READY; GESELL PROVIDES SUPPORTING EVIDENCE FOR TEACHER OBSERVATION; TESTS PERMIT AN EARLY AND ACCURATE DIAGNOSIS OF READINESS."	"THE BEST EVIDENCE IS MULTIFACTOR DIAGNOSIS OF SPECIFIC TRAITS & ABILITIES, TESTS BY CLINICAL SPECIALISTS, SIMILAR TO SPECIAL EDUCATION STAFFING."	"THE TEACHER CAN OBSERVE CHILDREN'S USE OF ENVIRONMENT, MATERIALS & RELATIONSHIPS; ASSESSMENT OF READINESS MUST BE CONTEXT-DEPENDENT; TESTS PROVIDE ONLY PARTIAL INDICATION."	"TEACHERS RELY ON OBSERVATION THROUGHOUT THE YEAR, TO REVEAL LACK OF ACADEMIC PREPARATION AND SOCIAL IMMATURITY; FORMAL TESTS ARE VIEWED WITH CAUTION."

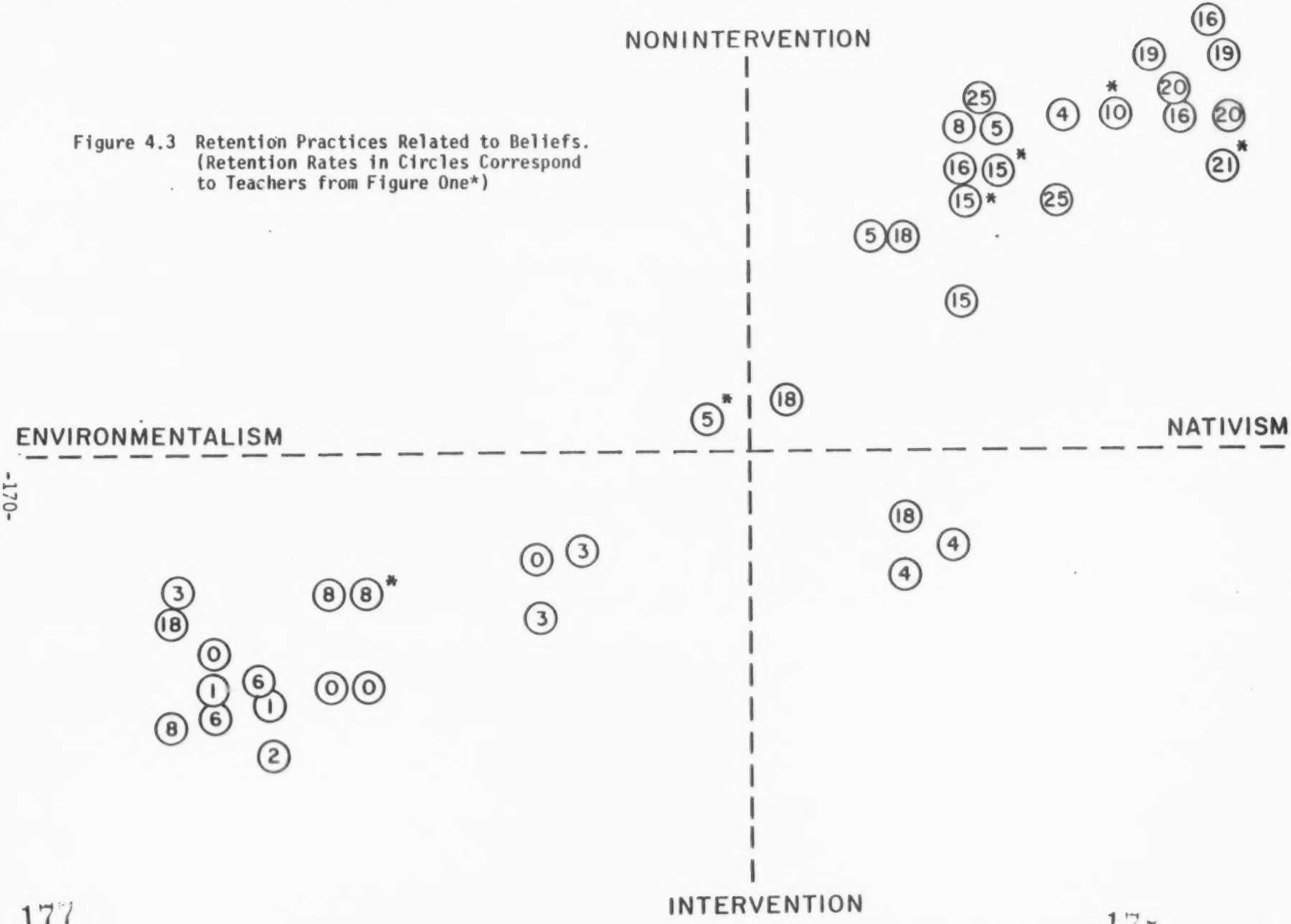
FIGURE 4.2 (continued) (2

CATEGORY OF BELIEFS	SECTOR ONE	SECTOR TWO	SECTOR THREE	SECTOR FOUR
BELIEFS ABOUT THE POSSIBILITY OF CATCHING UP	"THERE IS LITTLE LIKELIHOOD THAT A CHILD WHO IS DEVELOPMENTALLY BEHIND HIS AGE-MATES WOULD CLOSE THE GAP THAT SEPARATES THEM."	"IF DEFICITS IN ABILITIES CAN BE CORRECTED, CHILD CAN PROGRESS."	"YOU CANNOT PREDICT WHEN AND UNDER WHAT CIRCUMSTANCES A CHILD WILL PROGRESS."	"A CHILD WHO IS LESS PREPARED THAN HIS PEERS CAN CLOSE THE GAP GIVEN THE RIGHT EDUCATIONAL CIRCUMSTANCES; ACADEMIC ASSISTANCE IS REQUIRED."
BELIEFS ABOUT POSSIBILITIES OF INFLUENCING A CHILD'S PREPARATION FOR SCHOOL	"BECAUSE LEARNING IS GOVERNED PRIMARILY BY INTERNAL MECHANISMS, INTERVENTION IS FUTILE WITH DEVELOPMENTALLY UNREADY CHILD. EXTRA HELP OR REMEDIATION CAUSES PRESSURE, FRUSTRATION AND COMPENSATION. TEACHER CANNOT INFLUENCE PSYCHOMOTOR ABILITIES, ABILITY TO ATTEND, SOCIAL MATURITY, ETC."	"DEFICITS CAN BE REMEDIED BY DIRECT INTERVENTION IN THE DISORDERED PSYCHOLOGICAL ABILITY."	"THE TEACHER CAN MAKE A DIFFERENCE, THOUGH IT IS MORE DIFFICULT WITH LESS MATURE CHILD; LEARNING IS A COMPLEX INTERACTION BETWEEN CHILD'S ABILITIES AND OPPORTUNITIES PROVIDED. TEACHER CAN INFLUENCE PSYCHOMOTOR DEVELOPMENT, ATTENTION AND EMOTIONAL MATURITY."	"THE TEACHER CAN MAKE A DIFFERENCE AS CAN THE PARENT AND OTHER ASPECTS OF ENVIRONMENT; WITHIN A BROAD RANGE OF PUPIL ABILITIES, WHAT THE PUPIL LEARNS IS LARGELY A FUNCTION OF OPPORTUNITIES AND EXPERIENCES."
BELIEFS ABOUT CAUSES OF LACK OF PREPARATION	"CHILDREN ARE NOT READY BECAUSE OF LOW DEVELOPMENTAL AGE, CHRONOLOGICAL AGE, SEX, NOT IQ, SMALL EMPHASIS ON PRESCHOOL OR ENVIRONMENT."	"CHILDREN ARE NOT READY BECAUSE OF LACK OF BACKGROUND EXPERIENCES, FAMILY STABILITY, FAMILY INHERITANCE OF SPECIAL ABILITIES, WITHIN NORMAL RANGE OF DEVELOPMENT."	"CHILDREN ARE NOT READY BECAUSE OF COGNITIVE OR EMOTIONAL IMMATURITY, STRESS, LACK OF AVAILABILITY OF PARENTS, LIMITED PRESCHOOL OR PRIOR ACADEMIC EXPERIENCE, INSTRUCTIONAL FAILURE, LOW EXPECTATIONS."	"CHILDREN ARE NOT READY BECAUSE OF POOR INTELLECTUAL ABILITY, INATTENTIVE OR UNSKILLED PARENTS, PRIOR EDUCATIONAL AND ENRICHMENT EXPERIENCES, THE TEACHER OR EDUCATIONAL PROGRAM."

FIGURE 4.2 (continued) (3

CATEGORY OF BELIEFS	SECTOR ONE	SECTOR TWO	SECTOR THREE	SECTOR FOUR
BELIEFS ABOUT WHAT THE TEACHER CAN DO	"TEACHERS CAN PROVIDE CHILD WITH MORE TIME TO MATURE; PLACE CHILD IN DEVELOPMENTAL KINDERGARTEN, PRESCHOOL, SEND HIM HOME ANOTHER YEAR; PLACE IN SLOW GROUP IN CLASS; REDUCE INSTRUCTION BELOW FRUSTRATION LEVEL, LOWER EXPECTATIONS, BOOST SELF-CONCEPT, USE MANIPULATIVES; RETAIN IN KINDERGARTEN OR TRANSITION; PROVIDING ACADEMIC ASSISTANCE IS IRRELEVANT AND HARMFUL."	"THE TEACHER CAN IDENTIFY PROBLEM AREA, REFER FOR PROFESSIONAL EVALUATION, BUILD UP OR WORK AROUND PROBLEM AREA; ADAPT INSTRUCTION; PROVIDE ACADEMIC ASSISTANCE AIMED AT CORRECTING THE DISORDERED ABILITY."	"THE TEACHER CAN ARRANGE THE ENVIRONMENT SO EVERY CHILD CAN BE SUCCESSFUL; STUDY THE CHILD TO SEE WHAT INTERESTS HIM; SET UP COOPERATIVE, PEER TEACHING; INDIVIDUALIZE INSTRUCTION; RETAIN ONLY IF 1ST GRADE TEACHERS ARE NOT LIKELY TO ACCOMMODATE INDIVIDUAL DIFFERENCES."	"THE TEACHER CAN PROVIDE ADDITIONAL ACADEMIC HELP; ACCOMMODATE DIFFERENCES IN ACHIEVEMENT; HOLD HIGH EXPECTATIONS, REINFORCE AND TRAIN; WORK HARD AND ENCOURAGE THE PUPIL TO WORK HARD."
BELIEFS ABOUT ENDPOINTS OF KINDERGARTEN	"BY THE END OF KINDERGARTEN, ALMOST ALL CHILDREN SHOULD MEET A COMMON STANDARD."	"MOST READINESS SKILLS SHOULD BE MASTERED SO THAT 1ST GRADE PHONICS CAN COMMENCE; DIFFERENCES IN PREPARATION ARE EXPECTED TO BE ACCOMMODATED BY 1ST GRADE TEACHERS OR SPECIAL EDUCATION."	"THERE ARE MULTIPLE STANDARDS AND MULTIPLE WAYS OF ACHIEVING THEM; CHILDREN COME INTO KINDERGARTEN VARIABLE AND THEY LEAVE VARIABLE; VARIABILITY DOES NOT MEAN FAILURE."	"NOT ALL CHILDREN WILL BE AT THE SAME LEVEL; THOUGH MASTERY OF SKILLS IS A GOAL, 1ST GRADE TEACHERS SHOULD BE ABLE TO ACCOMMODATE DIVERSITY."

Figure 4.3 Retention Practices Related to Beliefs. (Retention Rates in Circles Correspond to Teachers from Figure One*)



*Retention rates are the school percentages except where marked by *. Starred figures were reported by teacher who recently transferred.

II. BELIEFS ABOUT THE VALUE OF RETENTION AND TWO-YEAR PROGRAMS.

In contrast to the diversity of beliefs about development portrayed in Section One, the teachers expressed near unanimity in their support of the benefits of retention and two-year programs. This support crossed sectors displayed in Figure 4:1. Support came from teachers in high-retaining and low-retaining schools. In those schools with pre-first grade classes and two-level kindergartens, the teachers were strongly committed to the values of such programs and wished to see them adopted throughout the district. Several schools without such programs coveted them and felt they were preferable to retention in kindergarten. Several others preferred the transition or K-1 program over retention or two-year kindergartens. A small group preferred retention in first grade rather than kindergarten because of the longer day and greater academic emphasis. In contrast, the great majority favored retention in kindergarten rather than first grade because the stigma is less and because it provides another year with relatively less pressure.

In general, teachers believe that any risks that might be associated with retention or two-year programs are minor. The benefits are believed to be substantial, especially for the "bright, immature child." The teachers acknowledge that handicapped children are better off staffed into special education rather than retained in grade. The real risks, the teachers feel, come from promoting a child who ought to be retained. Only one or two remembered even one child who had suffered any negative consequences as a result of retention. Most teachers believed that children who had been retained had

been saved from several years of "struggle," and some teachers believed that a child on the bottom of his age-appropriate class would be near the top of the class into which he was retained. Compared to the parents interviewed, the teachers were much more sanguine about the benefits and drawbacks of retention and two-year programs. Compared to the parents, teachers also reported considerably less conflict and disagreement about the process of deciding to retain a child.

III. PARENT-BLAME

Those parents who dissented from teachers' recommendations about two-year programs were subjected to a fair amount of mild abuse by teachers. "My hands are tied," said one teacher. "The principal didn't back me up," said another. "If only the parents would realize that it's nothing to do with intelligence, it isn't something they've done." "There's a lot of male ego involved" [in the father's objections]. A reading of the transcripts causes some concern that a child whose parents do not accept the teacher's recommendation may be victimized by the self-fulfilling prophesy.

IV. PRESSURES ON THE KINDERGARTEN TEACHER

In the process of analyzing the data from the teacher interviews, a major theme emerged concerning the pressures on the kindergarten teacher. The first source of pressure is from the increased capabilities of children who enter kindergarten. Compared to their counterparts 20 years ago, they are older on the average, have had access to television that teaches, many have been to educationally sophisticated preschools or otherwise

been with groups of children in organized settings. Some of them enter kindergarten able to read books. Thus the teacher may feel it is necessary to propel these skilled children from kindergarten to first grade work and beyond. At the same time teachers have to deal with the less able, less experienced, younger (but still legally eligible for kindergarten) child and provide him or her with work traditionally associated with kindergarten. The result is an large range of talents and needs in one classroom. Many of the teachers not only feel burdened by this degree of heterogeneity, but they begin unconsciously to adapt instruction to the higher levels in the class. Evidence that teachers are encountering this pressure is liberally sprinkled across the interview transcripts. There are feelings of satisfaction and joy expressed about dealing with the more mature and able children; there are regrets about the trouble caused by the "unready." One teacher seemed to identify with the former while describing one of the latter, "We sat in a circle reading our book while he was over there rolling around on the floor." The practice of keeping children out of school until they are six and the growing prevalence of preschools raise the standards. The older, more experienced child becomes the standard for the whole class; the teacher adjusts her program upward to fit that standard, and the five year-old begins to look abnormal. Repeatedly throughout the interviews, teachers defined readiness for first grade by comparing one or two children with the norm. Lacking any absolute definitions of "ready", she sees the relatively younger and less ready as abnormal or pathological.

In another time or another district, the same child would seem average. Only because he is with 25 children who are listening quietly does he seem to be unready.

The second pressure faced by kindergarten teachers is pressure from above that pushes academic skills and objectives down into the kindergarten class. "The kindergarten today is not what it used to be," so said several teachers, parents, and observers. What was formerly (and in many other districts still is) a time for socialization, emotional separation from parents, and learning how to learn is in most BVPS schools a kind of prep school. The downward pressure of academic activities into kindergarten is felt both informally and formally. The curriculum guides use terms like "introduce" and "awareness" rather than "mastery," and thus cannot be viewed as a source of formal pressure. The guidelines for use of time in kindergarten (specifying so many minutes for reading readiness, and the like) are certainly a formal source of pressure. They leave almost no time in a hectic two and one half hour day for exploration and play. Texts and series available to the kindergarten teachers are extremely bookish.

The larger sources of downward pressure are informal. When a first grade teacher comes into the kindergarten or whispers in the lounge that Johnny should never have been passed because he doesn't know his sounds or when that teacher sends Johnny back to kindergarten because he doesn't belong in first grade, the kindergarten teacher receives a powerful message--teach sounds or suffer embarrassment to your professional image and damage to Johnny's psyche. To make sure the exiting kindergarteners have

the requisite skills, the teacher must spend time on these skills--socialization and learning to learn have to be gotten as they can. The teachers have to make the children ready; the children must be able to count to 100, know their sounds and letters and the like, so the first grade teachers can commence their own programs in September. Children who don't fit into this academic climate must be diverted somehow; i.e., sent home or retained. To use an industrial analogy, teachers sometimes use retention as a way of standardizing inputs to meet the demands for standardized outputs. By labeling a child as psychologically unready for school, the kindergarten teacher is attempting to regain control over her "inputs" because she is held accountable in the informal organization for her "outputs." She has accepted the implicit demand for an academic curriculum that produces standard packages of academic skills. She has also, by segregating the younger and less able children, decreased the amount of heterogeneity with which she must deal.

Another source of informal pressure is the parent who insists that the child who enters kindergarten should be guided along through the curriculum in a linear fashion. "You have not taught my son one thing this year," a teacher quoted a father of an advanced kindergartener.

It must be said that some teachers in this district effectively ignore and resist these pressures. To carry the industrial analogy one painful step further, these teachers adjust their "throughputs"--modify instruction to adjust for differences in the style or rate of learning of pupils, no matter

how diverse. For the most able children, these teachers provide enrichment and diversity, not merely the next primer or next objective on an ordered list that runs from K to 12. For the least able, modifications are made and faith is kept that eventually almost all children learn to read and compute if they are not already programmed for failure. Teachers who resist these pressures also have support from their principals, community, and fellow teachers, particularly the first grade teachers in the building.

CONCLUSIONS

Great diversity exists among the kindergarten teachers in this district with respect to what they believe about child development and the best ways to educate young children. Philosophical views range from nativists who believe that development procedes naturally and physiologically and without much assistance from the outside to environmentalists who believe that development is at least partially under the tutorial control of teachers and others. Three types of intervention were identified to characterize the teachers, along with one group that believed no intervention is the best intervention. Beliefs were related to retention practices, and seemed to be shared within a school building. There is logical consistency within a belief system, but inconsistencies and conflicts among systems.

The vast majority of kindergarten teachers believe retention and other two-year programs have benefits that far outweigh their risks. Of course, teachers in low-retaining schools have a different reference point than those in high-retaining schools.

We believe that there is a kind of pent-up demand for two-year and transition programs due to the degree of perceived value attached to such programs by the teachers and the relative absence of perception of their risk. Those teachers who might logically be expected to oppose such expansion do not see opposition as part of their professional role. We expect an increase in rates in the future, given no counterweight of professional opinion on the other side of the issue.

There is some concern from an analysis of teachers' beliefs and strong feelings that children whom teachers recommend to retain but whose parents resist will not be given complete opportunities to succeed.

We believe that both retention practices and beliefs about readiness may be the result of downward pressures of the academic curriculum into kindergarten and the upward pressures of accommodating to older and more able pupils entering kindergarten.

CHAPTER 5

Teacher Judgments About Readiness

To supplement the teacher interview data, a small experiment was conducted to determine which pupil characteristics are related to teacher judgments about readiness for first grade. When a teacher recommends that a child repeat kindergarten or judges that a child has poor prospects for success in first grade, what attributes of the child are the most salient in forming that opinion? Knowing that sex and age are correlated* with academic success in first grade, do teachers consider these factors in making their recommendations? To what extend are academic skills or social skills paramount in making judgments about first-grade readiness?

Implicit policies in three schools

In this study, a method called policy capturing or judgment capturing was used. However, before embarking on the experimental study, real data from the three highest retaining schools (in 1981-82) were examined. In Figures 5.1 and 5.2, the distributions of Santa Clara entry-level scores and ages are shown. The data are coded to distinguish boys from girls and retained versus non-retained pupils. These graphs were developed originally to highlight the characteristics of retained pupils to facilitate the matching task for the Chapter 2 outcome study. However, the location of the retained children in relation to the rest of the first-grade class does reveal implicit policies as to the type of student that is likely to be a candidate for retention.

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*These age and sex effects are quite small, however; see Chapter 1.

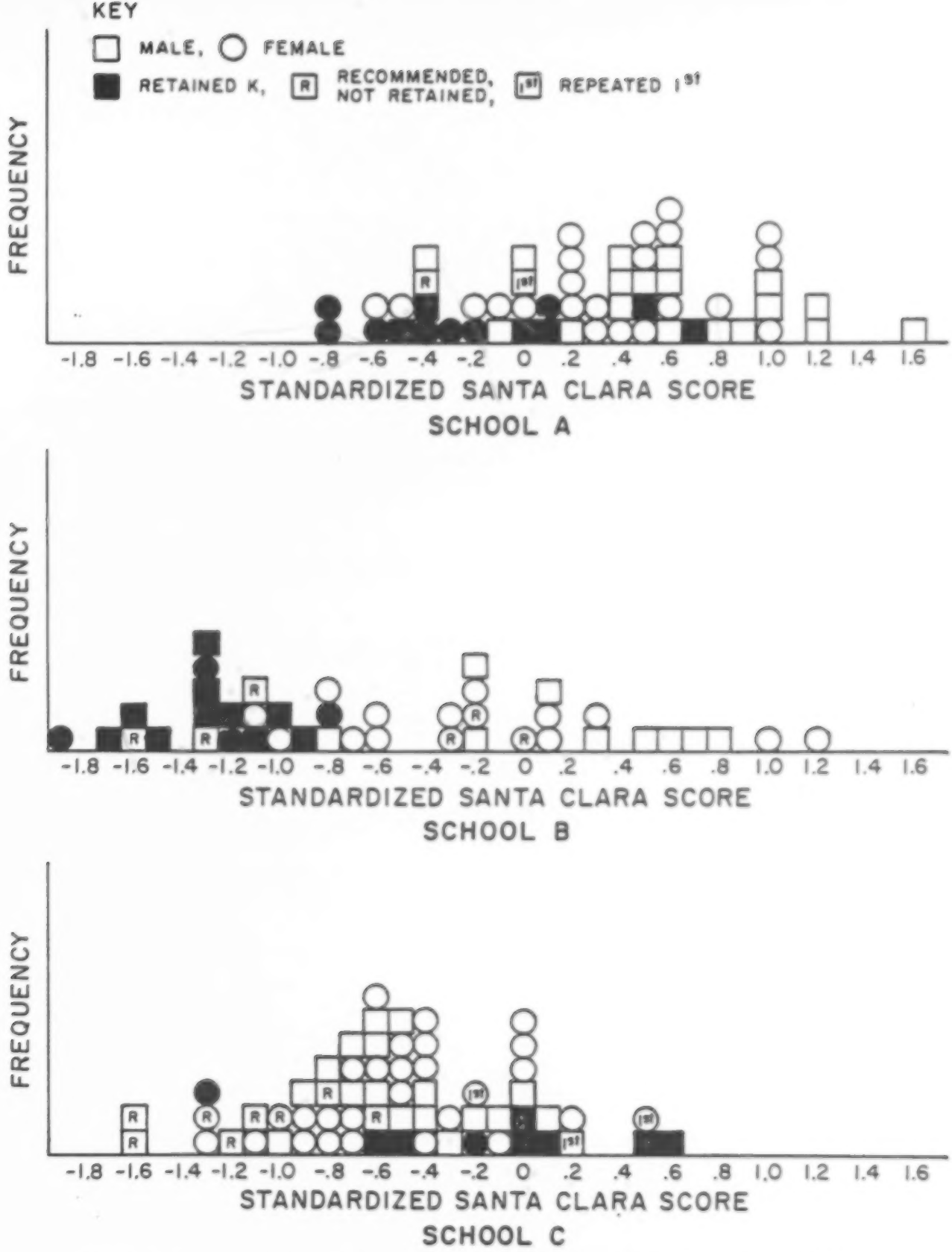
KEY
MALE, FEMALE
RETAINED K, RECOMMENDED, NOT RETAINED, REPEATED 1st
FREQUENCY
-1.8 -1.6 -1.4 -1.2 -1.0 -.8 -.6 -.4 -.2 0 .2 .4 .6 .8 1.0 1.2 1.4 1.6
STANDARDIZED SANTA CLARA SCORE
SCHOOL A
FREQUENCY
-1.8 -1.6 -1.4 -1.2 -1.0 -.8 -.6 -.4 -.2 0 .2 .4 .6 .8 1.0 1.2 1.4 1.6
STANDARDIZED SANTA CLARA SCORE
SCHOOL B
FREQUENCY
-1.8 -1.6 -1.4 -1.2 -1.0 -.8 -.6 -.4 -.2 0 .2 .4 .6 .8 1.0 1.2 1.4 1.6
STANDARDIZED SANTA CLARA SCORE
SCHOOL C

Figure 5.1 Distribution of entering kindergarten Santa Clara scores for retained and non-retaining first graders in three high-retaining schools

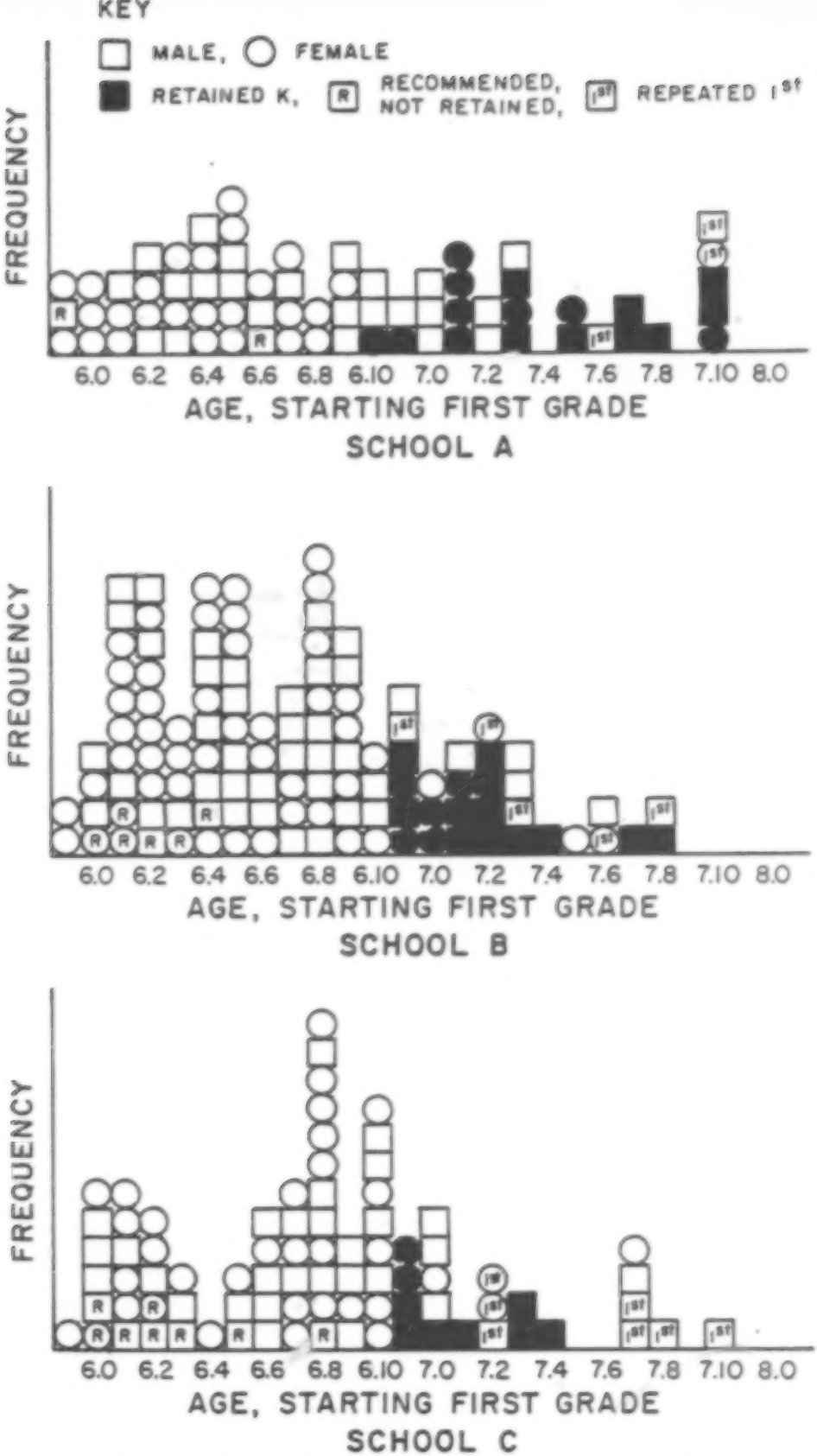
KEY
MALE, FEMALE
RETAINED K, RECOMMENDED, NOT RETAINED, REPEATED 1ST
FREQUENCY
6.0 6.2 6.4 6.6 6.8 6.10 7.0 7.2 7.4 7.6 7.8 7.10 8.0
AGE, STARTING FIRST GRADE
SCHOOL A
FREQUENCY
6.0 6.2 6.4 6.6 6.8 6.10 7.0 7.2 7.4 7.6 7.8 7.10 8.0
AGE, STARTING FIRST GRADE
SCHOOL B
FREQUENCY
6.0 6.2 6.4 6.6 6.8 6.10 7.0 7.2 7.4 7.6 7.8 7.10 8.0
AGE, STARTING FIRST GRADE
SCHOOL C

Figure 5.2 Distribution of ages when entering first grade for retained and non-retained pupils in three high-retaining schools

In School A, the retained children tended to be from the bottom half of the distribution on the screening inventory. In School B, the tendency to select on characteristics like those represented by the Santa Clara was even more pronounced, suggesting that the school's actual policy was to retain children who were below a certain level on the developmental-readiness measure*. School B also retained many more boys than girls and, switching to Figure 5.2, the retained children in School B tended to be the youngest in their class (before retention). Although both Schools A and B select students for retention who are relatively low on the Santa Clara (compared to other children in the same school), in an absolute sense the retained children in School A are not so low scoring as those repeating in School B. In fact, it looks as if about half of the retained children in School A would probably not have been asked to repeat had they attended School B.

The Santa Clara data for School C repeaters was initially quite puzzling. Keeping in mind that the readiness scores were obtained at the time of first entry to kindergarten for both retained and non-retained children, the tendency was to retain the children (mostly boys) with the highest scores on the developmental tasks. It was at this juncture that the recommendations for retention were added to the graphs; the Rs in Figure 5.1 indicate the additional children who were recommended for retention but whose parents refused. Apparently then, teachers recommended retention for about equal numbers of high and low scoring kindergarteners but there was a systematic effect whereby parents of children with the highest developmental scores agreed to the retention and the parents of the lower scoring children did not.

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* Santa Clara scores were available for all but three retained children from their first year in kindergarten (1981-82). However, the following year (82-83), the Santa Clara was not routinely administered in School B; therefore, data were not available for 70 of the non-retained children.

Because characteristics reflected by the Santa Clara Inventory appeared to be unrelated to retention recommendations in School C, data were plotted by entrance age. In Figure 5.2 a clearer picture of School C's underlying policy emerges. Young boys are more likely to be recommended for two years of kindergarten than children with any other characteristics. All but one of the 17 recommendations (and actual retentions) are for children in the younger half of their class; most were from the first three months, i.e., with July, August, and September birthdays. A similar tendency to select on youngness was noted in School B. For the small number of cases available, there appears to be no relationship between age and first grade retention decisions.

Teachers in all three of the high-retaining schools might say that some children should be in a two-year kindergarten program because they are not yet "ready" for first grade. The characteristics of children actually retained, however, suggest that even in three schools with similar retention practices, the teachers responded to different characteristics in determining unreadiness. The policy capturing experiment was designed to elicit the relative emphasis given to different pupil characteristics among kindergarten teachers in all Boulder Valley public schools.

Policy capturing study

Method. The policy capturing method is well known to social psychologists who study the processes of human judgment and public policy formation. Social judgment theorists (e.g., Hammond, Stewart, Brehmer & Steinmann, 1975) have found that often decision-makers (including teachers) cannot resolve differences in disputes over policy because each individual may be unaware of his own implicit policies. Therefore, participants in the debate cannot give adequate "reasons" for their positions, and common ground and avenues for compromise cannot be identified.

Policy capturing is a technique used to understand the judgment process and thus make individuals' decision rules explicit and amenable to discussion. Because these decision rules or weights are inferred from actual judgments in the policy capturing experiment, they no longer depend on the individual's ability to articulate an implicit policy. Social judgment theory and policy capturing have been applied in many research settings including analyses of the factors psychiatrists consider in identifying severity of depression (Fisch, Hammond & Joyce, 1982) or the factors underlying teacher expectations for reading success (Cooksey, Freebody & Davidson, 1986). Policy capturing is also used as a practical device in real-life policy disputes to inform the debate and help resolve conflict. For example, the Boulder Open Space Board engaged in a social judgment theory study to arrive at a compromise policy for weighting various criteria in deciding which parcels of land to acquire (Steinmann, Smith, Jurdem & Hammond, 1977).

In the present study, we were interested in which pupil characteristics teachers attend to in making recommendations for kindergarten retention or transition room placement or in judging the likelihood of a child's success in first grade. Forty-four Boulder kindergarten teachers participated in the policy capturing experiment; with the exception of the mountain schools without separate kindergartens, the sample was the entire population of kindergarten teachers. Teachers were asked to read 45 pupil cases (presented in the form of profiles of pupil characteristics). All of the cases were simulated cases of kindergarteners completing one year in school. Information was presented indicating the child's sex, age at entrance to kindergarten, and physical size (presented in the form of percentiles). Ratings of pre-reading academic skills and an index of social maturity were available for each case. Teachers were asked to consider these five factors and to make two judgments

about each child: what placement should be recommended for the following year (repeat kindergarten, transition program, pass but watch, or pass to first grade) and (if there were no other program options) what the child's chances were for success in first grade the next year. The directions to teachers and a sample profile are found in Appendix D.

Teachers were told that the purpose of the research was "to study the perceptions of teachers concerning children's readiness for first grade." Teachers were also told at the start that when they finished rating the 45 cases they would be asked to make "one overall rating to show the relative importance of the five information factors." We were interested in collecting this information to compare the explicit or articulated policies with the implicit policies as identified by the experiment. However, the specific directions were also included so that it would be clear to teachers that the research was focused on the relative weighting of the five factors.

The details of the case selection will be presented in an academic paper in preparation by the authors. For those interested in the methodology, the combinations of cues (information factors) were made using an orthogonal, fractional-factorial design. Because the cues are in fact zero correlated (or so weakly correlated as to be imperceptable), an orthogonal design was defensible and would yield more stable estimates of the policy weights. To the extent that weak correlations between factors were ignored, the final set of cases had more unusual (less frequent) pupil profiles than would occur in a typical sample of 45 children; however, all of the cases were realistic and could be matched to real pupil files.

Analysis and discussion

Each teacher's judgment data were analyzed using multiple regression. The implicit weight given to each factor in making retention recommendations can be estimated by determining the extent to which variance on the factor predicts the judgment score (1-4 on question one; 1-10 on question two). The policy weights (Beta weights) and multiple Rs are reported for each teacher in Table 5.1 With two exceptions, the teachers demonstrated a great deal of consistency in their judgments as evidenced by multiple Rs of .76 and above. Statistical consistency implies that the teachers were reliable in attending to the same characteristics across the 45 pupil cases.

In Table 5.1 it is apparent that teachers as a group give greater emphasis to academic skills and the social maturity factor than to other pupil characteristics. However, teachers differed considerably in the extent to which one or the other of these two major factors dominated their judgments. Furthermore, teachers had variable policies about whether the child's sex, relative age, or physical size also influenced their recommendations about retention. The differences in implicit policies are best illustrated by the diagram in Figure 5.3 Teachers in the upper-left corner of the picture relied almost exclusively on the child's social maturity to judge whether he or she is likely to be successful in first grade (the five most extreme cases were teachers 6, 7, 26, 27, and 33 in Table 5.1). The teachers in the lower-right corner of the graph gave almost complete emphasis to academic skills in judging readiness for first grade. Teachers in the middle gave equal weight to academic skills and social maturity. Most teachers gave some additional consideration to other factors such as age, size, and sex (in decreasing order of frequency). The importance of these additional characteristics is shown by the shading in Figure 5.3 and the Beta weights in Table 5.1

Table 5.1

Policy Weights (Standardized Beta Weights) for each Cue and Multiple Correlation Coefficients in Predicting Retention Recommendations and Success in First Grade

	Q1: Retain/Pass						Q2: Success in First Grade					
Teacher	Sex	Age	Size	Academ. Skills	Social Matur.	R	Sex	Age	Size	Academ. Skills	Social Matur.	R
1	.09	.27	.09	.27	.66	.84						
2	.08	.09	.04	.84	.20	.94	.08	.11	.01	.85	.19	.92
3	.02	.48	.08	.55	.35	.87	-.02	.46	.20	.50	.33	.84
4	.11	.28	.08	.61	.49	.89	.06	.11	.14	.75	.37	.89
5	.19	.20	.19	.43	.54	.85	.[illegible]	.22	.11	.54	.61	.91
6	.08	.19	.17	.28	.79	.92	-.[illegible]	.13	.24	.33	.74	.94
7	.05	.07	.02	.42	.74	.91	.02	-.03	.06	.26	.89	.96
8	.21	.36	.22	.53	.44	.89	.06	.24	.15	.67	.45	.90
9	-.10	.25	.14	.79	.26	.90	-.05	.02	.02	.89	.28	.95
10	.29	.21	.10	.33	.63	.84	.30	.20	.16	.46	.55	.86
11	-.12	.63	.23	.24	.27	.82	.02	.26	.08	.71	.40	.89
12	-.03	.28	.20	.59	.46	.84	.03	.05	.24	.74	.38	.90
13	.09	.20	.18	.73	.30	.88	.06	.08	.14	.88	.23	.96
14	-.06	.19	.09	.71	.31	.85	.08	.14	.03	.81	.35	.93
15	-.10	.17	.16	.58	.55	.93	-.13	.05	.12	.74	.40	.92
16	-.03	.13	.11	.73	.33	.93	-.04	.13	.05	.74	.37	.96
17	.03	.11	.02	.85	.24	.91	-.06	.18	.10	.83	.28	.91
18	.05	.22	.24	.73	.35	.90	-.02	.16	.14	.84	.35	.97
19	.05	.00	.08	.76	.04	.89	.00	.06	.11	.90	.18	.96
20	-.02	-.02	-.01	.87	.12	.94	.03	.05	-.01	.95	.09	.97
21	.10	.34	.18	.64	.36	.92	.08	.18	.12	.77	.35	.90
22	.15	.40	.16	.60	.32	.88	.02	.28	.24	.73	.31	.90
23	.02	.12	.22	.37	.70	.90	.07	.04	.16	.39	.66	.87
24	.08	.08	.16	.88	.08	.93	.05	.14	.05	.86	.14	.92
25	.13	.34	.16	.68	.37	.90	.08	.23	.10	.65	.42	.88
26	.18	.42	.03	.22	.67	.87	.09	.32	.05	.22	.77	.88
27	.27	.08	-.06	.13	.83	.89	.07	.02	.04	.10	.92	.97
28	-.01	.18	.05	.44	.63	.90	.02	.06	.26	.50	.56	.87
29	-.07	.13	.07	.61	.53	.92	-.04	.03	.07	.70	.37	.91
30	-.02	.36	.10	.74	.24	.89	.05	.17	.14	.74	.38	.89
31	.16	.25	.28	.53	.44	.86	.16	.10	.27	.57	.48	.87
32	.02	.22	.11	.75	.36	.90	-.03	.06	.14	.81	.25	.91
33	-.08	.12	-.04	.46	.70	.89	-.13	.02	-.01	.33	.76	.91
34	.02	.11	.08	.70	.42	.86	-.07	.13	.06	.51	.47	.76
35	.00	.57	.10	.57	.37	.88	.06	.36	.20	.66	.38	.89
36	.03	.39	.17	.52	.47	.89	.03	.33	.09	.59	.55	.89
37	.03	.13	.04	.54	.53	.89	.02	.09	.06	.68	.44	.92
38	.08	.42	.13	.39	.35	.81	-.05	.39	-.03	.62	.29	.80
39	.08	.38	.25	.41	.57	.89	.00	.28	.11	.41	.55	.81
40	-.02	.28	-.02	.57	.50	.83	.02	.23	-.07	.49	.38	.74
41	-.03	.20	.19	.47	.60	.92	.03	.26	.21	.41	.68	.93
42	.09	.16	-.01	.52	.65	.95	.05	.01	-.01	.60	.65	.97
43	.04	.08	.02	.59	.65	.93	.01	.09	.03	.67	.60	.95
44	.11	.22	.30	.63	.42	.93	.20	.14	.27	.60	.47	.86

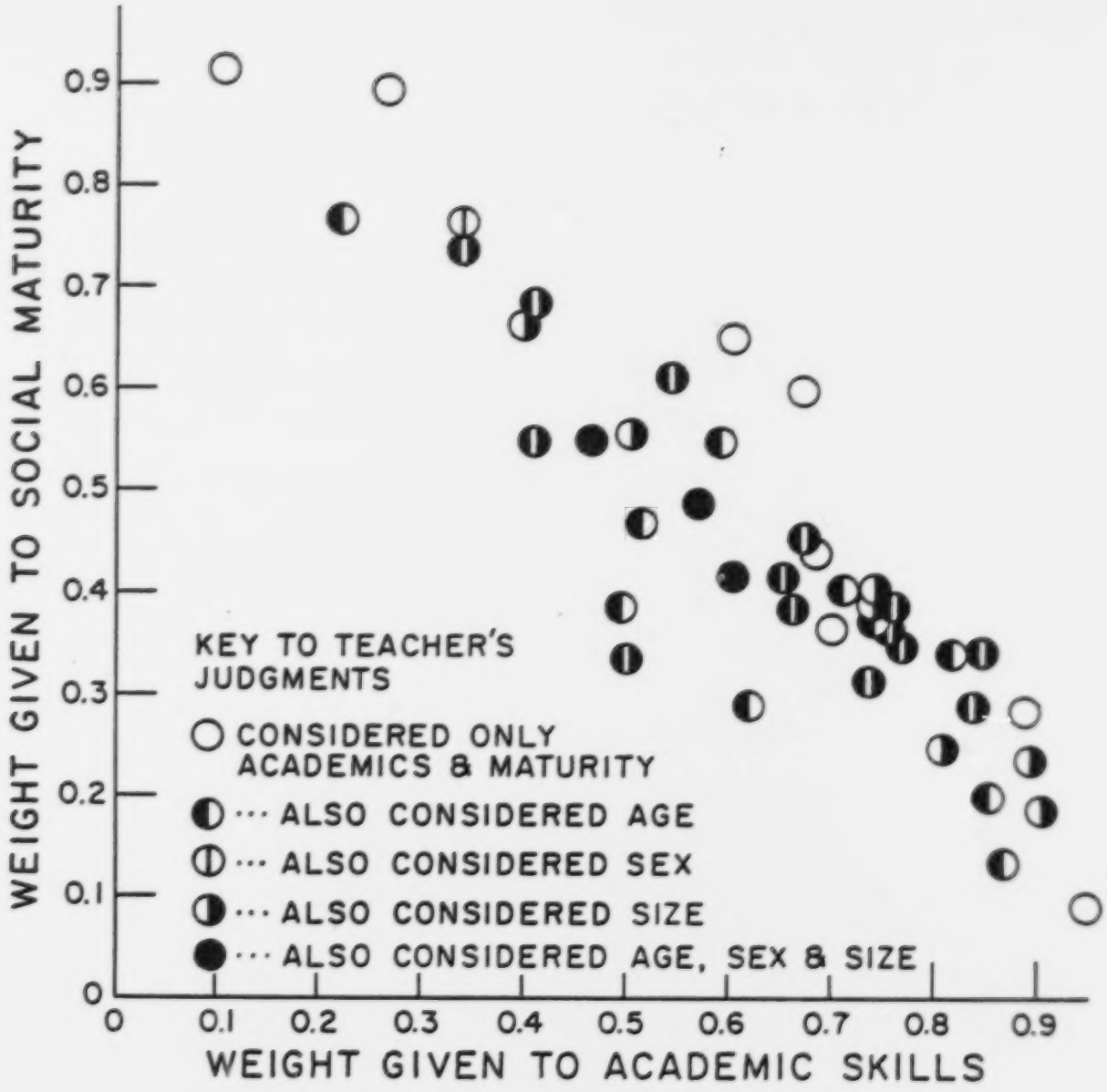

Figure 5.3 Two-dimensional representation of major factors considered by teachers in making judgments about chances for success in first grade

For most teachers, the judgment leading to a retention or pass recommendation was essentially the same as the judgment about the likelihood of success in first grade (i.e., their policy weights for Question 1 and Question 2 were the same). Some teachers, however, drew a distinction between the two tasks and apparently considered age and sex more heavily in making a recommendation to repeat even if these factors were not as relevant to expected success in first grade. For example, teachers 26 and 27 were much more willing to pass girls to first grade (Betas for sex = .18, .27) even though sex had very little weight in their ratings of first grade success. Teacher 11 gave a very high weight to age in the retention recommendations compared to its weight in judging success; i.e., older children were more likely to pass regardless of their other characteristics. Teachers who had different policies for Question 1 and Question 2 are apparently saying that there is more to the retention decision than just prognosis for first grade success and, for whatever reasons, they are more willing to recommend retention for boys or for younger-age kindergarteners.

In the analysis of teacher interviews (Chapter 4), a congruence was found between the opinions and philosophies of teachers in the same school. The data in Table 5.1 were analyzed to determine if there was evidence of similarity in responses from teachers who work together. Although colleagues within a school did not always have identical policies, on the average the variation in weights assigned to the major factors was much greater between schools than within. Since all ratings were done independently under the supervision of one of the researchers, the evidence of shared policies within schools suggests that teachers have come to some mutually agreed upon views about factors influencing readiness and retention.

In the original research questions guiding the kindergarten study, two related concerns had been not only to identify which pupil characteristics lead to retention decisions but also to identify what philosophical positions might be associated with different retention practices. When data about actual retention practices were superimposed on the picture in Figure 5.3, some relationships between factors considered and actual retention rates could be identified. The five teachers who had the most extreme policies about the importance of social maturity represented the entire kindergarten faculties of three very high retaining schools (19%, 21%, and 25% retained in kindergarten, respectively). However, with the exception of these extreme policies, there is not a systematic relationship between retention rate and relative emphasis given to social maturity versus academic readiness skills. Some other high retaining schools have shared teacher policies that place relatively more weight on readiness skills or a combination of academics and other factors. When the analyses of Chapters 4 and 5 are compared (teacher interviews versus policy capturing), it appears that differences in beliefs about the nature of development and the possibilities for teacher intervention explain more about the range of differences in retention rates than do the differences in policies regarding pupil characteristics identified here.

The inferred policies based on real data discussed in the first section of the chapter were generally confirmed by the policy capturing experiment. Based on actual data, School A appeared to select students for retention who had low scores on the Santa Clara readiness measure. In the policy capturing data, the three School A teachers are clustered together in the lower-right of the graph with the greatest weight given to academic skills. Looking at actual retained and recommended for retention cases, School C appeared to use a decision policy of retaining young boys. In the judgment capturing

experiment, the two School C teachers are among the three most extreme of all teachers in emphasizing social maturity as the dominant consideration in making retention judgments. They also gave relatively large weight to sex on Question 1, compared to all other respondents. The two teachers from School B have more intermediate policies which do not as neatly correspond with the characteristics of actually retained children. The School B teachers are more different from each other than most other pairs of colleagues; one considers age and academics in making judgments; the other attends to social maturity and sex (as much as academics). Considering this internal difference of opinion, it is not surprising that the children who repeated kindergarten in School B appeared to have some combinations of low skills, young age, or be male.

The primary purpose of the policy capturing experiment was to identify implicit policies and study the relationship, if any, between teacher policies and retention practices. In the literature on Social Judgment Theory from which these procedures are derived, there is also a parallel component to the research method that compares the decision weights with the actual relationships in the decision context. For example, when academics or maturity are weighted heavily in making judgments, it is presumed that there is a relationship (correlation) between that indicator (e.g., social readiness) and the criterion (e.g., sucess in first grade) in the real world. The believed or implied correlations revealed in the policy capturing experiment can then be checked for authenticity against the actual correlations, called "ecological validities."

On question two, when teachers considered different factors in predicting success in first grade, they may or may not have reflected the actual relationships of these characteristics with different success criteria. In

Table 5.2 are the data available from the Chapter 2 first grade study showing the obtained correlations between several kindergarten (first year) characteristics and first grade outcome measures. The age, sex and size variables are comparable to the information the teachers had available in making the judgments. Note that the age and sex correlations are very small and congruent with the minor weight given to these characteristics in the majority of teacher judgments. A few teachers may place more emphasis on these characteristics than is warranted by the actual relationships. In the technical paper mentioned earlier, we will be able to explore further how much implication discrepancies between policies and empirical relations have for correct and incorrect placement decisions. We will also have, after completion of the predictive validity compondent in June 1985, the actual correlations for the Metropolitan Readiness Tests and the Gesell School Readiness Test.

TABLE 5.2

Correlations Between Entering Kindergarten Characteristics and First Grade Outcome Measures (for normal age first graders) n = 280-500

	First Grade Outcomes						
	TEACHER RATINGS					CTBS	
	Read.	Math	Soc. Matur.	Learner Self-Conc.	Attn.	Read.	Math
Age	.13	.23	.12	.14	.12	.15	.16
Sex	.10	-.03	.22	.11	.21	.08	-.05
Height %ile	-.05	.01	.04	-.04	-.02	-.12	.02

Summary

The analyses in Chapter 5 were intended to identify the characteristics of children than lead to a kindergarten retention decision.

The files of children from three high-retaining schools were examined. In the first, the children who were asked to repeat kindergarten were consistently low on readiness skills. In the second school, a combination of factors accounted for the retention decision: low readiness scores, being young, and being male. In the third school, the policy appeared to be to recommend young boys for kindergarten retention (regardless of readiness scores), but because only the parents of the high scorers agreed to retention, the retained children tended to be in the upper half of the kindergarten class on readiness skills.

A policy capturing experiment was conducted involving all 44 Boulder kindergarten teachers. Teachers read summaries of 45 pupil files and made judgments about retention and likelihood of success in first grade based on five pupil characteristics: sex, age, physical size, academic skills, and social maturity. The policy capturing experiment showed the weight each teacher gave to each factor in making recommendations for the 45 pupil cases. The two major factors emphasized by almost all teachers were the academic and maturity factors. A few teachers (five representing three schools) had very extreme policies compared to other teachers, considering social maturity almost exclusively in making their recommendations. These five teachers also had very high retention rates. Except for these few teachers, there was not a systematic relationship between which pupil characteristics were emphasized and whether retention rates were high or low. Some high-retaining schools have policies focused on pupil academic skills.

Teachers in the same school usually had very similar policies in terms of which pupil characteristics should lead to kindergarten retention. But across the district these policies were much more varied.

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APPENDIX A

Teacher Ratings (Chapter 2)

FIRST GRADE RATINGS OF ACHIEVEMENT AND SOCIAL ADJUSTMENT
BOULDER VALLEY PUBLIC SCHOOLS

The purpose of this rating form is to summarize, as simply as possible, some of the most important performances and accomplishments of the children in your classroom. Most of this information is similar to what you will be filling out on report cards. However, because report cards are so different from school to school we have to ask you to fill out a form that is used in common in all the elementary schools. This form will be used this year only.

On the left side of the first page please write in the names of the children in your class in alphabetical order. Write their ID numbers in the space provided.

You are then asked to rate each child in the following key areas:

Reading achievement.

Math achievement.

Social maturity. A child at the high end of this dimension gets along well with classmates (is neither bossy nor immature). A child at the low end of this continuum may be anxious, have trouble on the playground or be overly dependent on the teacher.

Learner self concept. A child with a positive learner self concept is proud of his or her own school work and believes in his or her ability to learn. A child with a negative learner self concept is discouraged about trying to learn.

Appropriate attention to school work. A child at the high end of this continuum can follow directdions well and is able to concentrate on lessons. A child at the low end of this continuum may be distractable and out of seat often and has to be reminded to "pay attention."

For each rating area, you are to make two adjustments, one is relative to the other children in your class. The other is in relationship to grade level.

GRADE LEVEL RATING

For the grade level rating you are not forced to put only a certain number of children in each category. Instead, judge each child in relation to what you consider to be acceptable achievement (or behavior) for first graders at the end of the year.

On page one, rate each child on each of the dimensions according to this rating scale:

AGL = Above Grade Level
GL = Grade Level
BGL = Below Grade Level
R = Recommended to repeat first grade next year in part because of low performance on this dimension

NOTE: Some of the teachers who have filled out this form prefer to do the relative rating page first and then the grade level ratin. You may do the two ratings in whatever order makes the most sense for you.

RATING RELATIVE TO CLASS

To do the relative ratings you will have to think about the class as a whole. Who are the very strongest or very weakest children on the dimension being rated? Which children do you consider to be average in this class?

Under each dimension write in the names of the children who are the highest 5 and the next highest 5 in this class on that dimension. Then, write in the names in the two bottom boxes for the children who are the lowest 5 and the next lowest 5 on this dimension for this class. The remaining children are considered to be "average" in this class and belong in the middle box. It is not necessary to write in the names in the middle box. We will assume that all of the names from page 1 that are not in the other boxes belong in the middle category.

Remember, the relative rating is separate from the grade level rating. The entire class could be above grade level, but the purpose of the relative rating is to show how the children compare to each other on a particular dimension.

We appreciate the extra time it takes to do these ratings conscientiously. THANK YOU. For our information, please report the amount of time you spent completing this form:

____hours, ____mins.

GRADE LEVEL RATINGS

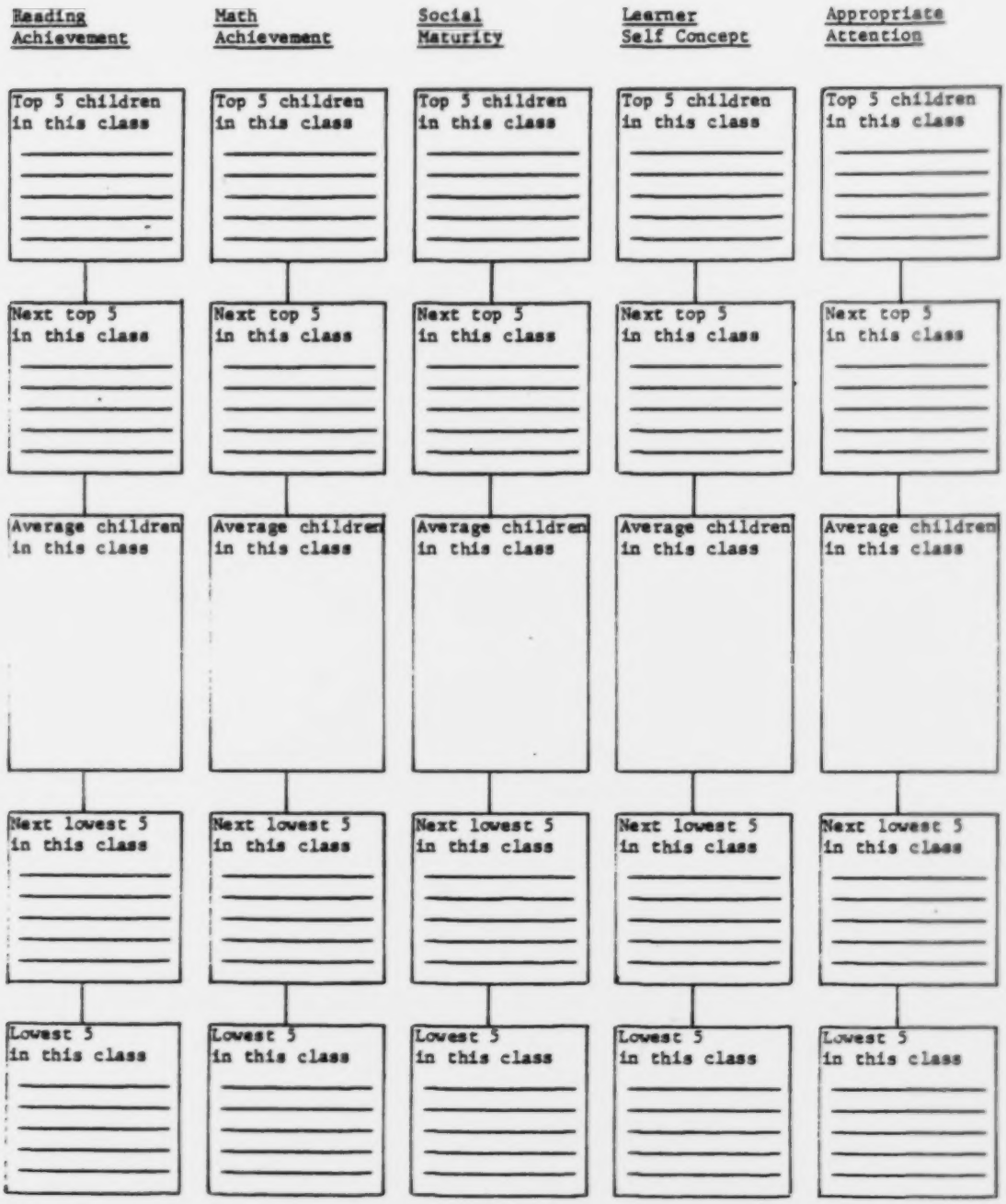
For each dimension, circle each child's level of performance

AGL = Above Grade Level
GL = Grade Level
BGL = Below Grade Level
R = Recommended to repeat first grade next year, in part because of low performance on this dimension

Child's Name	ID #	Reading Achievement	Math Achievement	Social Maturity	Learner Self Concept	Appropriate Attention
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL
_____	_____	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL	R BGL GL AGL

RELATIVE RATING IN THIS FIRST GRADE CLASS

For each dimension write in the names of the children who are the highest 5 and next highest 5 in the class on that dimension. Then, for each dimension write in the names of the children who are the lowest 5 and next lowest 5 in relation to their classmates. The rest of the children are in the middle box and are considered to be average in this class. It is not necessary to write in names in the middle box. We will assume that all of the names from page 1 that are not in one of the other boxes belong in the middle box.



APPENDIX B

Parent Interviews (Chapter 3)

Interview #_____

Student ID_____

INTERVIEW PROTOCOL: PARENTS OF FIRST GRADERS

I am Dr. Shepard.
Did you receive the letter from the school district describing the study of kindergarten readiness?_____
Is now a good time to ask you some questions about your child's school history?

Date_____ Yes_____ No, reschedule Date_____
Time_____ Time_____

I would like to record your answers to my questions. Do I have your permission to record our conversation?_____Of course, you can decline to answer any of the questions if you wish and the answers that you do give will be kept confidential. None of the information you provide will be identified by name.

FACTS:

My questions are about (Name)_____, who is now completing first grade. His (her) birthdate is _____which means he was_____(age) when he started K.

Started K at (school)_____
_____
_____
_____first grade

STARTING KINDERGARTEN:

I would like to take you step by step from the time before_____started K until now.
First, the time before kindergarten....
Thinking back to when your child started K, what was your feeling about his (her) readiness for school?

ready for school work_____
attitude toward school_____
ability to pay attention & follow directions_____

Had your child attended preschool prior to the K year? Yes/No If so, for how many years?_____
Did this experience contribute to your child's readiness for K?

Did your child participate in any type of screening program to determine his (her) readiness for kindergarten? Yes/No

Describe:

Results:

Did you participate in any kind of orientation program at school prior to the start of K? What was the nature of that orientation? (Does anything stand out in your mind about the purpose of the orientation meeting and what was said?)

young_____ 5.0-5.5
middle_____ 5.6-5.11
(old)_____ 6.0-

At the time, what were your thoughts about whether your child should start K that year or wait another year?
(Had you considered starting your child in K a year earlier?

What factors were important to you in deciding when to start your child in school? (....or was it just automatically determined by age?)

Did you receive advice from teachers, neighbors, or your pediatrician about starting your child earlier or later?

END OF KINDERGARTEN:

Next, I want to go to the end of kindergarten. Think about the end of your child's K year. What were your feelings about _____'s progress in K?

What did his report card say about his rate of progress?

NR Keeping in mind that this study is about having some children repeat kindergarten, let me ask you if you ever considered this possibility for your child?

R _____ended up spending two years in kindergarten (or spending an additional year in pre-first).

Can you tell me how and when the possibility of repeating K was first discussed?...Who first mentioned this option as a possibility? When was it discussed?

What were the reasons for repeating K. (academic, maturity...?)

Teacher's:

Yours:

Others:

What were your feelings about the decision at that time?

(Was there any disagreement? How was it resolved?)

END OF FIRST GRADE:

Next, I want to ask you about first grade.

Now at the end of the first grade year, how would you describe your child's progress?

In school subjects, would you say he is:

doing extremely well	doing above average work	doing about average work for first grade	doing below average but passing work	having very serious difficulty with first grade work

How would you describe his attitude toward school?

very positive, loves school	positive, likes school	so/so	has a slightly negative attitude toward school	has a very negative attitude toward school

How would you describe his relationship with school mates?

Is very popular, gets along very well with peers	Is above average, gets along well with others	About average for his grade in getting along with others	Is slightly below average in getting along with others	Has a great deal of difficulty in getting along with others

R Does _____play mostly with kids in his same grade or his same age or both?

How ready would you say your child is now for second grade?

Very ready, I expect him to be very successful in 2nd grade	About average, I expect him to be a fairly typical 2nd grader next year	Possibly not ready	Definitely not ready We have decided to have him repeat 1st grade or, we expect difficulties

R RETENTION DECISION:

Now looking back, what would you say are some of the benefits or drawbacks to having your child spend two years in kindergarten?

In that second year of K, what kind of extra help did your child receive? Did he get more of the same content as the year before or different content?
Was the extra year beneficial because of what was taught or because it gave him an extra year to grow and mature?

Ending time_____
Ellapsed time_____

APPENDIX C

Coding Categories for Teacher Interview Analysis (Chapter 4)

PRE-KINDERGARTEN

- PRESCHOOL - Mention of, beliefs about
- SENDHOME - Mention of keeping 5 yr olds out
- % QUAL-K - % of 5 yr. olds qualified for kindergarten
- PreK-QUAL - Qualifications for entry into kindergarten
- PRECAUSE - Courses of differences in qualification

KINDERGARTEN

- K-PURPOSE-Beliefs about the purpose of kindergarten
- K-DESC - Description of kind. practices
- K-GROUP - Dealing with heterogeneity in grouping
- K-EXPECT-Expectations for kindergartners
- PRODUCT-Indications of a "process/product orientation"
- K-QUAL-Endpoints of kindergarten, what are the qualifications for successful exit?
- K-QUAL-Char-Characteristics of the unqualified
- K-QUAL-EVID-Evidence of unqualification
- K-QUAL-TIME-How soon is unqualification evident
- K-QUAL-SEVER. - How bad does it have to be? (Tolerance differences)
- K-QUAL-TRACT - Can unqualification be remedied
- K-QUAL-FIX - What to do w/ the unqualified?
- K-QUAL-CATCH-Is it possible to catch up
- K-QUAL-CAUSE-Causes of unqualification (PH=physiological, H=heredity, T=teacher, P=parents, PR=program, EX=exposure to stimulation)
- K-EXTRA - Extra help provided to the unqualified and view of

RETENTION

- R-DEC - Description of decision to retain
- R-CRIT-Criteria for retention
- BENE/RISK-View of risks of not retaining, predictions/benefits of ret.
- ALT-RET -Alternatives to retention
- R-REACT-Child/parent reactions to retention
- %-RET - Percent retained, explanations

FIRST GRADE — FIRST

- Beliefs about first grade — FIRSTVIEW
- Contact w/first grade teachers (or lack of) including Backward Transitions, influence by 1st — FIRSTCONT

BELIEFS ABOUT DEVELOPMENT — BEL-DEL

- Origin of beliefs in experience, res. or theory — BEL-ORG
- smooth curves, fixed stages? blooming
- rate of development belief — BEL-RATE
- discrepancies from "norm"
- comparative judgments re. devel. — DEL-COMP
- tractability of development — DEL-TRACT
- attention span theory — ATTENSPAN

CONTEXT

- School characteristics & influence — C-SCHOOL
- Parent characteristics & influence — C-PARENT
- Teacher characteristics (spread of effect) — C-TEACH
- Principal characteristics — C-PRINC
- "Downward Pressure" (the curricular press of content into lower grades) — DOWN
- Contact w other K teachers, (spread of theory) — CONTACT
- NORMATIVE IMPRESSIONS (other children influence judgment of the development of) — C-NORM

GESELL

- Use of, belief in Gesell Test — GESTEST
- Mention of Gesell Philosophy — GESTPHIL

MISCELLANEOUS

- "Parent Blame" — PAR-BLM
- "Consequences of Pushing" — PUSH
- "Struggle" — STRUGGLE
- Staffing — STAFF
- COMPETE

APPENDIX D

Policy Capturing Materials
(Chapter 5)

CASE REVIEW INSTRUCTIONS

This review of student cases is part of the Kindergarten Study being conducted by researchers from the University of Colorado at the request of the Boulder Valley Public Schools. The purpose of this phase is to study the perceptions of teachers concerning children's readiness for first grade.

This booklet contains a series of profiles presenting information for a sample of kindergarten cases. The information factors are sex, age, physical size, a composite rating of academic skills, and a measure of social maturity. Details about these factors are given at the end of the instructions.

There are forty-five student profiles, or cases, included. You are asked to study each profile carefully and then answer two brief questions at the bottom of each page. The first question asks you to make a recommendation about what placement you think would be best for each child. For the second question you are to assume that the child will be promoted into first grade at the end of kindergarten regardless of any other recommendations; what are the student's chances for success in first grade? After reading all of the cases, you are asked to make one overall rating to show the relative importance of the five information factors.

These cases represent the range of student characteristics we observed in files or that were described to us by individual teachers. In some instances you may feel the available information is insufficient to make an accurate judgment about the case. Nevertheless, use the information given and answer each question to the best of your ability. Make the best decisions you can based on your interpretation of the information and your professional experience. There are no predetermined right or wrong answers. (If you feel an essential piece of information was left out, please make a note of it at the bottom of the page after you answer the questions.)

Your answers will be kept in the strictest confidence. No name will ever be associated with any response made. The data will be analyzed for the district as a whole or for large clusters of teachers.

It should take about an hour to answer questions on all forty-five profiles. In order for us to analyze the information properly, it is necessary for you to respond to all 45 cases. We realize that this represents a sizable investment of your time and are very grateful for your cooperation and professionalism.

BEST COPY AVAILABLE

Description of Information Factors:

Sex:

Age: Each child's age is reported as of the start of the kindergarten year. For example, the number 5.5 indicates that the child entered kindergarten when his chronological age was five years and five months.

Physical size: A composite height and weight percentile is reported for each child. As you know, the percentile indicates the percentage of children with height and weight less than the child in that case. A child with height and weight percentile of 89 is one who is taller and heavier than 89 percent of his or her peers.

Composite rating of academic skills:

Each child is ranked on academic skills in relation to other kindergarteners at the third quarter of the kindergarten year. This rating includes teacher judgments of pre-reading skills such as letter recognition and letter sounds, basic number concepts, and language development. A child at the very high end of this scale clearly has an above average vocabulary, is reading in the first grade primer, understands sets and can add one-digit numbers. A child at the very lowest end of this scale can't count, doesn't understand symbol-sound correspondence, doesn't understand that numbers mean something, doesn't understand sets, and doesn't know colors and shapes.

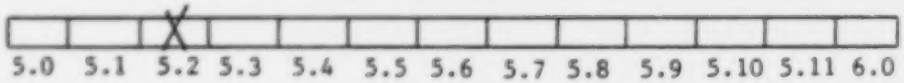
Index of social maturity:

This scale measures age appropriate relations with adults and other children and the child's ability to work independently in the school setting. A child at the very high end of this dimension shows leadership, works cooperatively with classmates, can follow three or more directions without repetition, doesn't cry inappropriately, works independently and takes care of his or her things. A child at the low end of this continuum can't follow even one direction without repetition, cries, relates with peers by hitting and biting, can't listen to a story for more than two minutes, and when given a choice always chooses play.

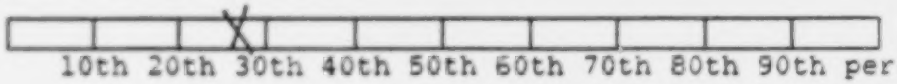
Student number 1

Sex: Boy

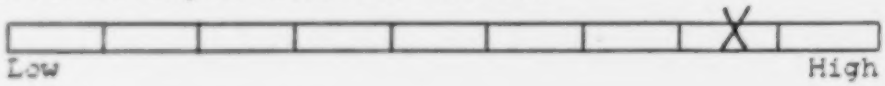
Age (when entering kindergarten):



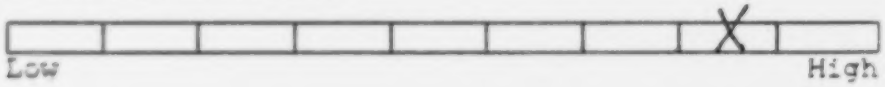
Physical size percentile:



Composite rating of academic skills:



Index of social maturity:



Assume that this child is in your kindergarten class. On the basis of the above characteristics answer the following questions:

1. First, considering this child's strengths and weaknesses, what recommendation would you make for this child? (Choose one.)

Repeat kindergarten (half day or extended day) _____
Transition year before first (pre-first or 1/2 K + 1st) _____

Pass to first grade but watch _____
Pass to first grade _____

2. If there were no other options or if for whatever reason this child went on to first grade next year, how would you rate the probability of his success? (Place an X on the scale to indicate your choice.)

_____ _____ _____ _____ _____
20% 40% 60% 80% 100% chance